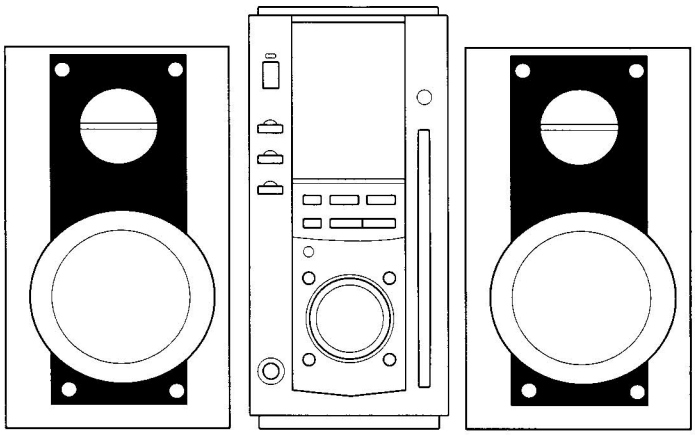
XR-MDS7 EZ



SERVICE MANUAL

MD/CD STEREO SYSTEM

BASIC CD MECHANISM : TN-CCD1001-902M
BASIC MD MECHANISM : AZG-5 YA

SYSTEM	REMOTE CONTROLLER
XR–MDS7	RC–AAT10

• If requiring information about the MD mechanism, see Service Manual of AZG-5 (YA), (S/M Code No. 09-99C-338-1N2).

aiwa

S/M Code No. 09-002-421-3R2

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SPECIFICATIONS

<FM tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	16.8 dBf
Antenna terminals	75 ohms (unbalanced)

<MW tuner section>

Tuning range	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

<LW tuner section>

Tuning range	144 kHz to 290 kHz
Usable sensitivity	1400 µV/m
Antenna	Loop antenna

<Amplifier section>

Power output	Rated: 12 W + 12 W (6 ohms, T.H.D. 1 %, 1 kHz/DIN 45500) Reference: 15 W + 15 W (6 ohms, T.H.D. 10 %, 1 kHz/DIN 45324) DIN MUSIC POWER 20 W + 20 W
Inputs	VIDEO/AUX: 700 mV DIGITAL IN (OPTICAL) Sampling frequency: 48 kHz/32 kHz Optical input level: more than –21dBm
Outputs	SUPER WOOFER: 0.8 V SPEAKERS: accept speakers of 6 ohms or more PHONES (stereo mini jack): accepts headphones of 32 ohms or more

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

<MD recorder section>

Scanning method	Non-contact optical scanner (Semiconductor laser application)
Recording system	Magnetic polarity modulation overwrite system
Rotation speed	Approx. 400 to 900 rpm (CLV)
Sampling frequency	44.1 kHz
No. of channels	Stereo: 2 channels Monaural: 1 channels
A-D, D-A converter	1-bit
Frequency	20 to 20000 Hz +0.5 - –1.5 dB
Wow and flatter	Unmeasurable

<General>

Power requirements	230 V AC, 50 Hz
Power consumption	55 W
Standby power consumption	1.7 W (power-economizing mode set to ON)
Dimensions of main unit (W x H x D)	100 x 210.2 x 271.5 mm
Weight of main unit	3.6 kg

<Speaker system>

Cabinet type	2 way, bass reflex (magnetic shielded type)
Speakers	Woofer : 85 mm Tweeter: 22 mm dome type
Impedance	6 ohms
Output sound pressure level	86 dB/W/m
Dimensions (W x H x D)	100 x 206 x 188 mm
Weight	1.5 kg

- Design and specifications are subject to change without notice.

- The word "BBE"and the "BBE symbol" are trademarks of BBE Sound, Inc.
  Under license from BBE Sound,Inc.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

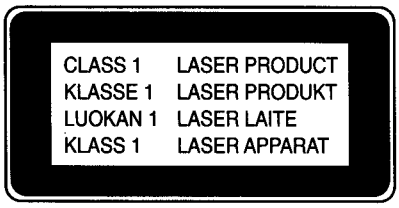
VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!
Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

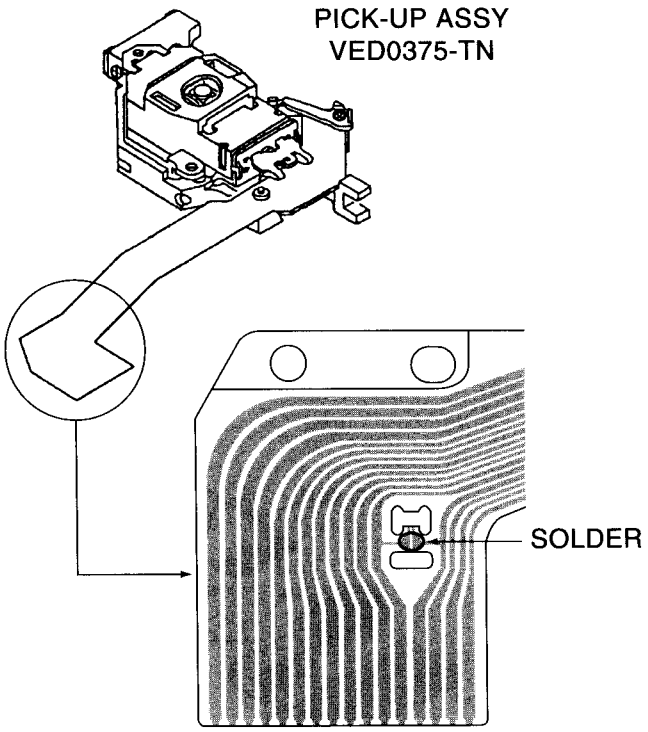


Precaution to replace Optical block

(VED0375-TN)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in right figure.

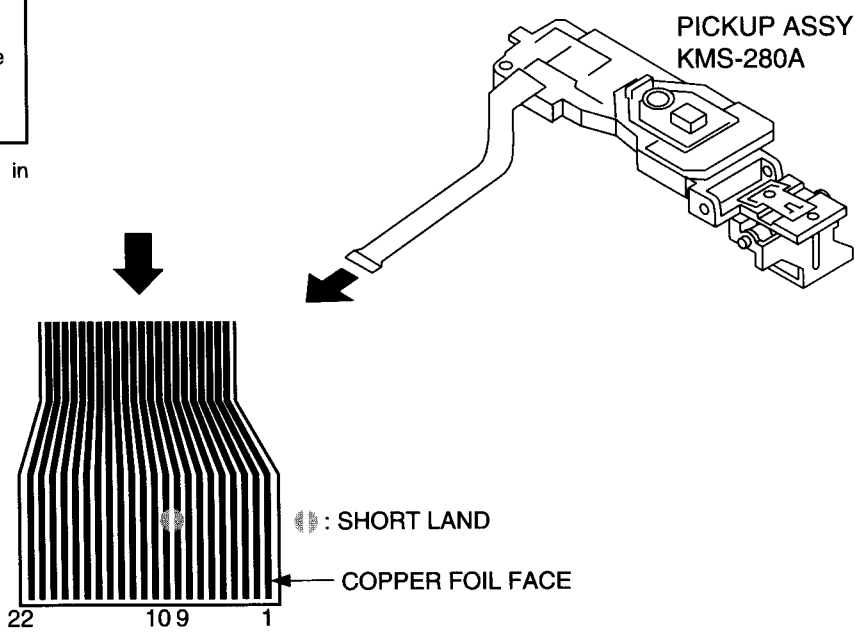


Precaution to replace Optical block

(KMS-280A)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in right figure.



SERVICE JIG AND TOOLS

The distance between the FRONT C.B and the MAIN C.B may be extended with the jig when repairing the FRONT C.B.

Name: JIG, EXT 18P
No.: SV-J00-071-010

1 Assemble Method

1) Remove the solders on the pattern side of JIG C.B.
2) Remove the covers by pushing the picks of sockets (as shown by Figure 1).
3) Insert and solder the parts into JIG C.B (as shown by Figure 2).
4) Insert FFC cable into each connector to connect a socket part and a plug part (Figure 2).

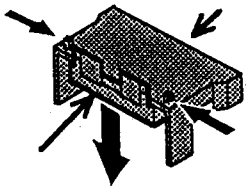


Figure 1

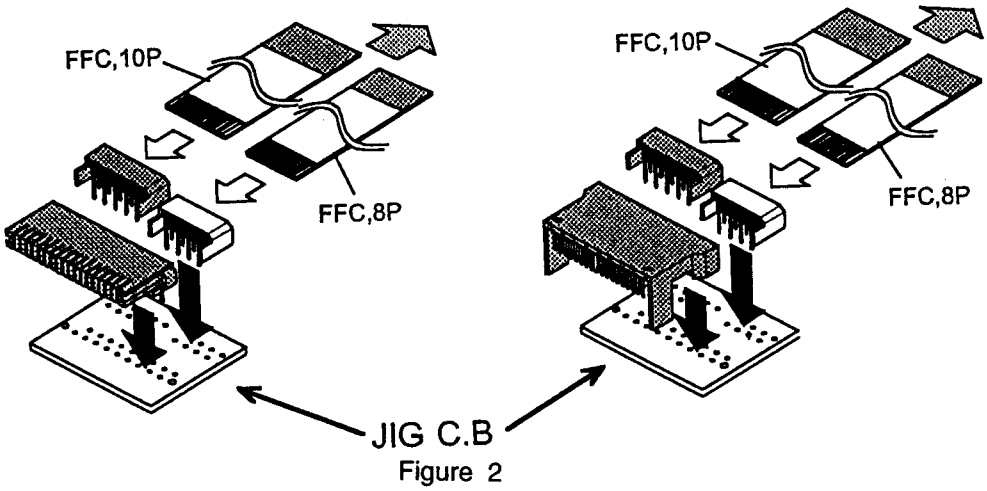
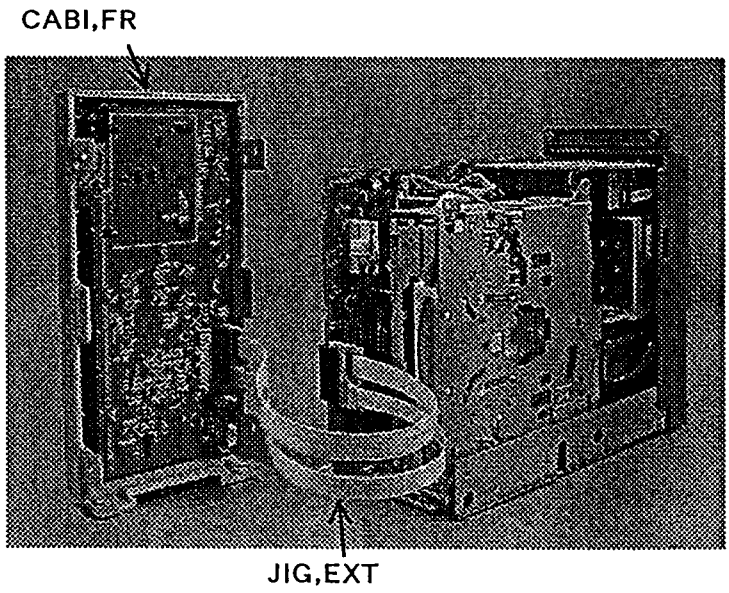


Figure 2

2 Connection

As shown in the figure below, connect the plug side to the FRONT C.B and the socket side to the MAIN C.B.

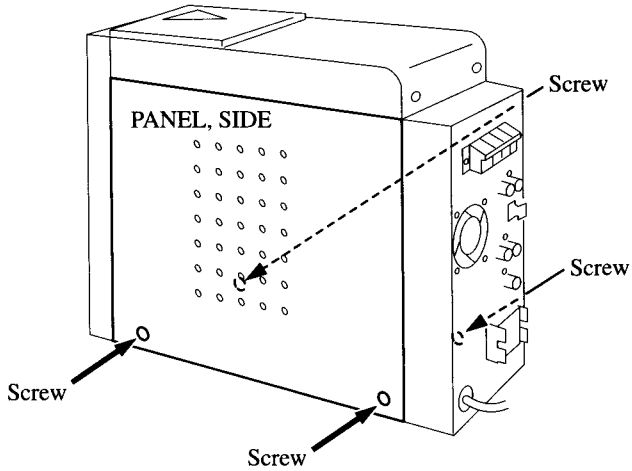
- Beware of short circuit on the pattern side of the JIG C.B, and FFC coming off.



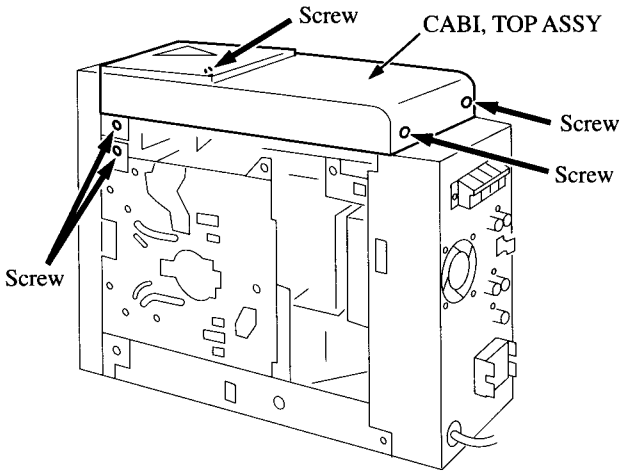
DISASSEMBLY INSTRUCTIONS

1. CD Block

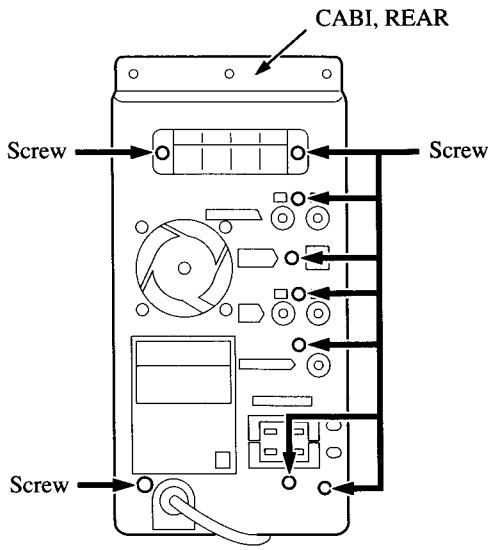
1) Remove the PANEL, SIDE.
Remove the four screws indicated by the arrows and remove the PANEL, SIDEs (right and left).



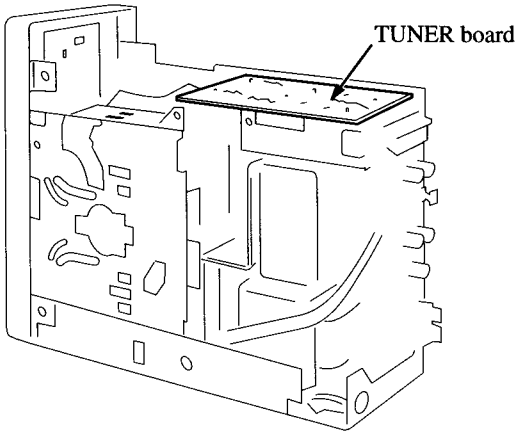
2) Remove the CABI, TOP ASSY.
Remove the five screws indicated by the arrows and remove the CABI, TOP ASSY.



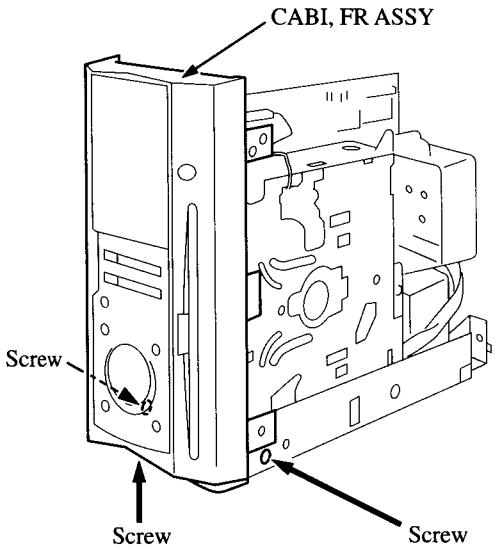
3) Remove the CABI, REAR.
Remove the nine screws indicated by the arrows and remove the CABI, REAR.

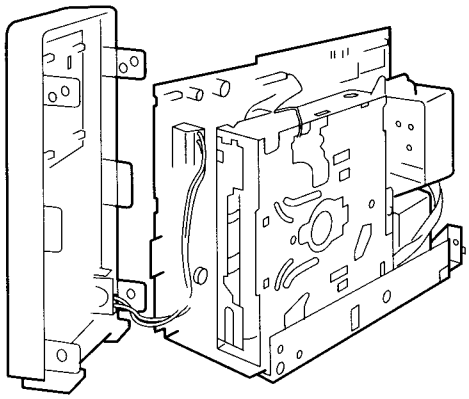


4) Remove the TUNER board.
Remove the TUNER board connected to the connector.

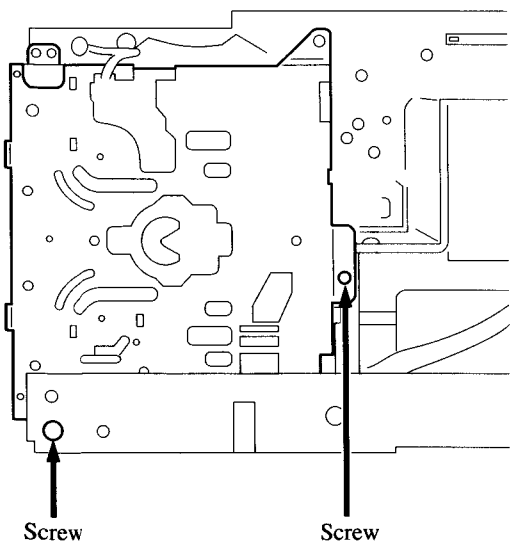


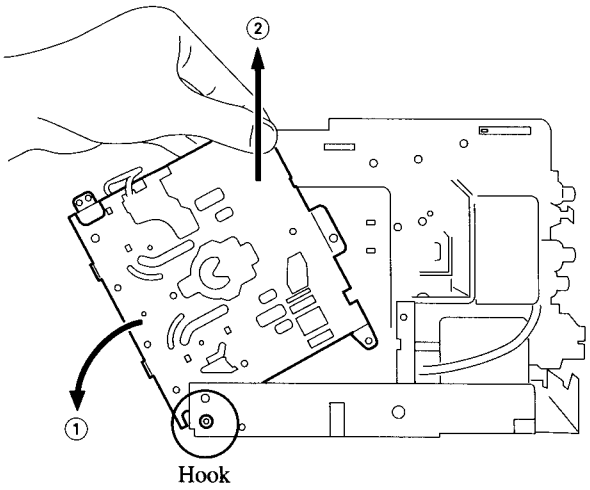
5) Remove the CABI, FR ASSY.
Remove the three screws indicated by the arrows and remove the CABI, FR ASSY.





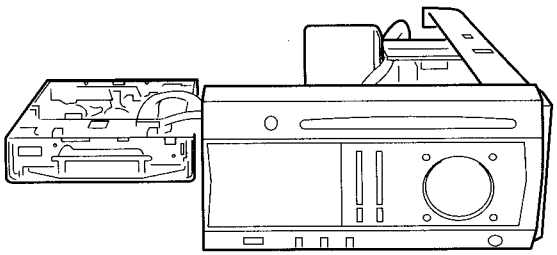
6) Remove the CD MECHA.
(1) Remove the two screws indicated by the arrows.
(2) Lift up the CD MECHA in the direction of the arrow ①
and release the hook indicated in the circle.
(3) Remove the CD MECHA in the direction of the arrow ②.

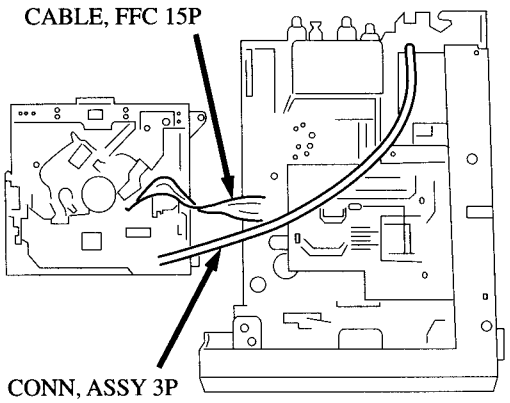




7) Lay the XR-MDS7 in its Service Position.
   (1) Attach the CABI, FR ASSY.
   (2) Place the main unit and the CD unit as shown below.
   (3) Connect the CABLE, FFC 15P and CONN, ASSY 3P to the CD MECHA and turn on the main power.

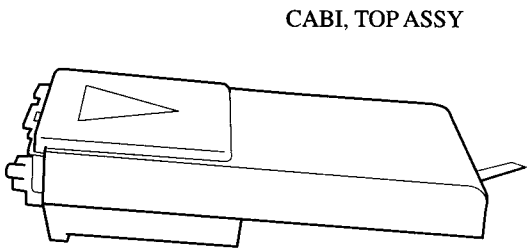
Service Position



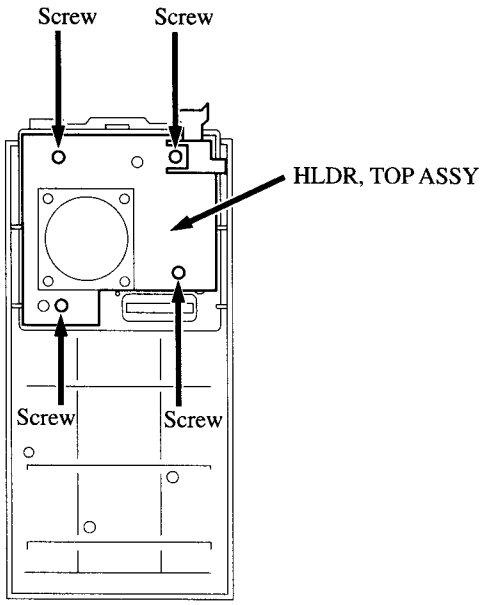


2. MD Block

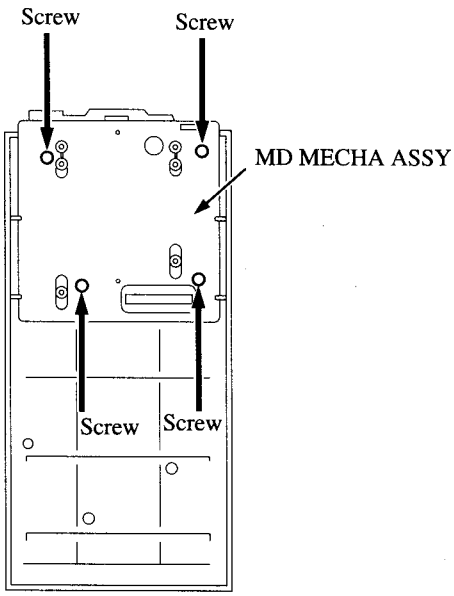
1)
2) Remove the CABI, TOP ASSY in the same procedure as
3) for CD block.



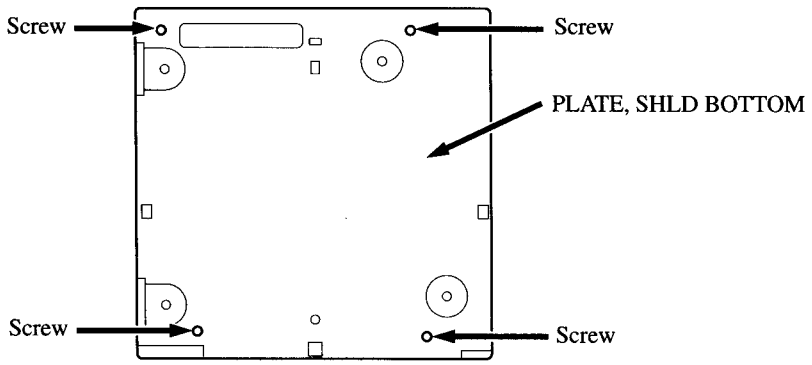
4) Remove the HLDR, TOP ASSY.
Remove the four screws indicated by the arrows and remove the HLDR, TOP ASSY.



5) Remove the MD MECHA ASSY.
Remove the four screws indicated by the arrows and remove the MD MECHA ASSY.

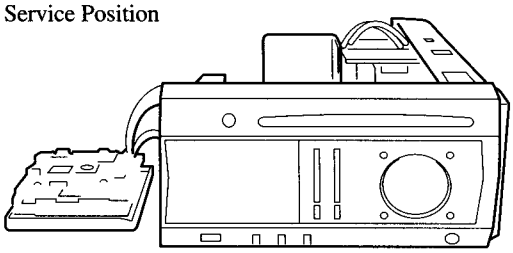


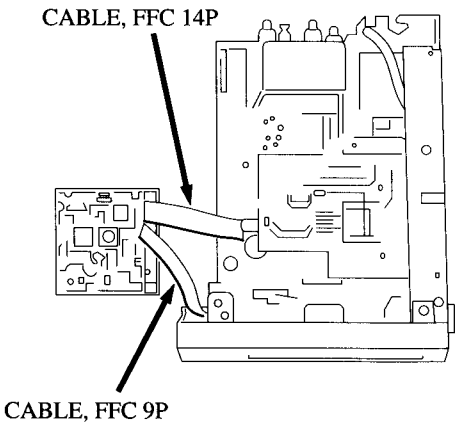
6) Remove the PLATE, SHLD BOTTOM from the MD MECHA ASSY.
Remove the four screws indicated by the arrows and remove the PLATE, SHLD BOTTOM.



7) Lay the XR-MDS7 in its Service Position.
(1) Place the main unit and the MD unit as shown below.
(2) Connect the CABLE, FFC 14P and the CABLE, FFC 9P to the MD MECHA and turn on the power.

Service Position





ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	8A-CJ5-601-010		C-IC,LC876580W-5N98
	87-070-246-010		IC,GP1U271X
	87-A21-552-010		IC,LA4663A
	87-017-888-080		IC,NJM4558MD
	87-017-915-080		C-IC,BU4094BCF
	87-A21-022-040		C-IC,BA3880FS
	87-A21-103-040		C-IC,MM1454XFBE
	87-A21-111-040		C-IC,M62495FP
	87-A20-971-040		C-IC,SN74LV14APW
	87-A20-870-010		IC,GP1F37R
	87-070-127-110		IC,LC72131D
	87-A20-913-010		IC,LA1837NL
	87-A20-440-040		C-IC,BU1920FS
	87-017-585-080		C-IC,NJM4580E
TRANSISTOR			
	87-026-245-080		TR,DTC114ES
	89-213-702-010		TR,2SB1370E
	87-A30-076-080		C-TR,2SC3052F
	87-A30-198-080		TR,KTC3199GR
	87-026-610-080		TR,KTC3198GR
	87-A30-075-080		C-TR,2SA1235F
	87-A30-234-080		TR,CSC4115BC
	89-505-434-540		C-FET,2SK543(4/5)
	87-026-609-080		TR,KTA1266GR
	87-026-210-080		C-TR,DTC144EK
	87-A30-087-080		C-FET,2SK2158
	87-A30-073-080		C-TR,RT1N 141C
	87-A30-273-040		C-TR,DTC124EKA
	87-A30-086-070		C-TR,CSD1306E
	87-026-211-080		C-TR,DTA144EK
	87-A30-072-080		C-TR,RT1P 144C
	87-026-297-080		C-TR,DTA144TK
	87-A30-074-080		C-TR,RT1P 141C
	87-A30-071-080		C-TR,RT1N 144C
	89-327-143-080		C-TR,2SC2714(0.1W)
	89-418-580-080		TR,2SD1858TV2
DIODE			
	87-020-465-080		DIODE,1SS133 (110MA)
	87-017-654-060		DIODE,GBU6J
	87-A40-313-080		C-DIODE,MC 2840
	87-A40-346-080		ZENER,MTZJ8.2C
	87-A40-345-080		ZENER,MTZJ10C
	87-070-274-080		DIODE,1N4003 SEM
	87-A40-336-080		ZENER,MTZJ27D T-72
	87-A40-341-080		ZENER,MTZJ 36 A
	87-A40-270-080		C-DIODE,MC2838
	87-A40-004-080		ZENER,MTZJ16A
	87-070-136-080		ZENER,MTZJ5.1B
	87-A40-509-080		ZENER,MTZJ6.8C
	87-A40-269-080		C-DIODE,MC2836
	87-A40-293-080		ZENER,DZ2.7M
	87-001-731-080		ZENER,HZS6C2L
	87-A40-299-080		ZENER,DZ5.1M
	87-017-149-080		ZENER,HZS6A2L
MAIN C.B			
C1	87-012-369-080		C-CAP,S 0.047-50F
C3	87-012-368-080		C-CAP,S 0.1-50 F
C4	87-012-368-080		C-CAP,S 0.1-50 F
C5	87-012-368-080		C-CAP,S 0.1-50 F
C6	87-012-368-080		C-CAP,S 0.1-50 F
C7	87-012-369-080		C-CAP,S 0.047-50F
C8	87-012-368-080		C-CAP,S 0.1-50 F
C9	87-A12-033-090		CAP,E 6800-25 SMG
C10	87-010-409-080		CAP,E 220-50
C11	87-010-553-080		CAP, ELECT 47-16V
C13	87-010-247-080		CAP,E 100-50
C14	87-010-235-080		CAP,E 470-16 M
C15	87-010-387-080		CAP,E 470-25 SME
C24	87-016-251-080		CAP,E 220-16 M SMG
C27	87-012-140-080		CAP 470P
C29	87-010-247-080		CAP, ELECT 100-50V
C30	87-016-044-080		CAP, ELECT 100-16V
C31	87-010-235-080		CAP,E 470-16 SME
C61	87-010-260-080		CAP,E 47-25 SME
C62	87-010-496-080		CAP, ELECT 3.3-50V
C91	87-010-401-080		CAP, ELECT 1-50V
C92	87-010-263-080		CAP, ELECT 100-10V
C93	87-010-553-040		CAP, ELECT 47-16V
C101	87-A11-242-040		CAP,E 220-10 M 5L SRM
C102	87-A11-242-040		CAP,E 220-10 M 5L SRM
C103	87-010-196-080		CHIP CAPACITOR,0.1-25
C104	87-010-198-080		CAP, CHIP 0.022
C105	87-010-196-080		CHIP CAPACITOR,0.1-25
C106	87-010-493-040		CAP,E 0.47-50 GAS
C108	87-010-157-080		C-CAP,S 18P-50 SL
C109	87-012-156-080		C-CAP,220P-50 CH
C110	87-010-196-080		CHIP CAPACITOR,0.1-25
C111	87-010-079-040		CAP,E 100-6.3 5L
C112	87-010-194-080		CAP, CHIP 0.047
C114	87-010-194-080		CAP, CHIP 0.047
C115	87-010-498-040		CAP,E 10-16 GAS
C116	87-010-196-080		CHIP CAPACITOR,0.1-25
C117	87-010-196-080		CHIP CAPACITOR,0.1-25
C118	87-010-196-080		CHIP CAPACITOR,0.1-25
C119	87-010-322-080		C-CAP,S 100P-50 CH
C120	87-010-322-080		C-CAP,S 100P-50 CH
C121	87-010-322-080		C-CAP,S 100P-50 CH
C129	87-010-316-080		C-CAP,S 33P-50 CH
C130	87-012-349-080		C-CAP,S 1000P-50 J CH
C201	87-010-491-040		CAP, ELECT 0.22-50V
C202	87-010-491-040		CAP, ELECT 0.22-50V
C203	87-010-178-080		CHIP CAP 1000P
C204	87-010-178-080		CHIP CAP 1000P
C205	87-010-492-040		CAP, ELECT 0.33-50V
C206	87-010-492-040		CAP, ELECT 0.33-50V
C211	87-010-560-040		CAP, ELECT 10-50V
C212	87-010-260-080		CAP, ELECT 47-25V
C215	87-010-405-080		CAP, ELECT 10-50V
C216	87-010-405-080		CAP, ELECT 10-50V
C217	87-012-368-080		C-CAP,S 0.1-50 F
C218	87-012-368-080		C-CAP,S 0.1-50 F
C219	87-012-368-080		C-CAP,S 0.1-50 F
C220	87-012-368-080		C-CAP,S 0.1-50 F
C221	87-010-405-080		CAP, ELECT 10-50V
C223	87-012-368-080		C-CAP,S 0.1-50 F
C224	87-012-368-080		C-CAP,S 0.1-50 F
C303	87-016-044-040		CAP, ELECT 100-16V
C304	87-016-044-040		CAP, ELECT 100-16V
C305	87-010-494-040		CAP, ELECT 1-50V
C306	87-010-494-040		CAP, ELECT 1-50V
C307	87-010-553-040		CAP, ELECT 47-16V
C308	87-016-044-040		CAP, ELECT 100-16V
C401	87-010-196-080		CHIP CAPACITOR,0.1-25
C402	87-010-260-080		CAP, ELECT 47-25V
C403	87-010-404-080		CAP, ELECT 4.7-50V
C404	87-010-404-080		CAP, ELECT 4.7-50V
C405	87-010-404-080		CAP, ELECT 4.7-50V
C406	87-010-404-080		CAP, ELECT 4.7-50V
C407	87-010-188-080		CAP,CHIP 6800P
C408	87-010-188-080		CAP,CHIP 6800P
C409	87-012-140-080		CAP 470P
C410	87-012-140-080		CAP 470P

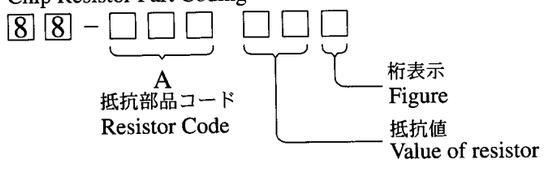
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C411	87-010-404-080		CAP, ELECT 4.7-50V
C412	87-010-404-080		CAP, ELECT 4.7-50V
C413	87-010-404-080		CAP, ELECT 4.7-50V
C414	87-010-404-080		CAP, ELECT 4.7-50V
C415	87-010-197-080		CAP, CHIP 0.01 DM
C416	87-010-197-080		CAP, CHIP 0.01 DM
C417	87-010-956-080		CHIP-CAP,S 0.068-25B
C418	87-010-956-080		CHIP-CAP,S 0.068-25B
C419	87-010-260-080		CAP, ELECT 47-25V
C421	87-012-140-080		CAP 470P
C422	87-012-140-080		CAP 470P
C552	87-010-112-080		CAP, ELECT 100-16V
C553	87-010-260-080		CAP, ELECT 47-25V
C554	87-010-197-080		CAP, CHIP 0.01 DM
C555	87-010-197-080		CAP, CHIP 0.01 DM
C557	87-010-405-080		CAP, ELECT 10-50V
C573	87-010-405-080		CAP, ELECT 10-50V
C574	87-010-405-080		CAP, ELECT 10-50V
C575	87-010-322-080		C-CAP,S 100P-50 CH
C605	87-010-182-080		C-CAP,S 2200P-50 B
C606	87-010-182-080		C-CAP,S 2200P-50 B
C607	87-010-213-080		C-CAP,S 0.015-25 B
C608	87-010-213-080		C-CAP,S 0.015-25 B
C609	87-010-491-080		CAP, ELECT 0.22-50V
C610	87-010-491-080		CAP, ELECT 0.22-50V
C611	87-010-491-080		CAP, ELECT 0.22-50V
C612	87-010-491-080		CAP, ELECT 0.22-50V
C613	87-010-553-080		CAP, ELECT 47-16V
C614	87-010-553-080		CAP, ELECT 47-16V
C615	87-010-154-080		CAP CHIP 10P
C620	87-010-407-080		CAP, ELECT 33-50V
C621	87-010-407-080		CAP, ELECT 33-50V
C622	87-010-402-080		CAP, ELECT 2.2-50V
C623	87-010-402-080		CAP, ELECT 2.2-50V
C631	87-010-401-080		CAP, ELECT 1-50V
C632	87-010-401-080		CAP, ELECT 1-50V
C633	87-010-197-080		CAP, CHIP 0.01 DM
C634	87-010-197-080		CAP, CHIP 0.01 DM
C635	87-012-154-080		C-CAP,S 150P-50 CH
C636	87-012-154-080		C-CAP,S 150P-50 CH
C637	87-012-154-080		C-CAP,S 150P-50 CH
C638	87-012-154-080		C-CAP,S 150P-50 CH
C639	87-010-404-080		CAP, ELECT 4.7-50V
C640	87-010-404-080		CAP, ELECT 4.7-50V
C641	87-010-196-080		CHIP CAPACITOR,0.1-25
C642	87-010-381-080		CAP, ELECT 330-16V
C643	87-010-805-080		C-CAP,S 1-16 ZF
C644	87-010-196-080		C-CAP,S 0.1-25 ZF
C677	87-010-319-080		C-CAP,S 56P-50 J CH
C701	87-010-196-080		C-CAP,S 0.1-25 ZF
C702	87-010-196-080		C-CAP,S 0.1-25 ZF
C703	87-010-196-080		C-CAP,S 0.1-25 ZF
C704	87-012-140-080		C-CAP,S 470P-50 J CH
C705	87-012-349-080		C-CAP,S 1000P-50 J CH
C706	87-012-349-080		C-CAP,S 1000P-50 J CH
C902	87-012-156-080		C-CAP,S 220P-50 CH
C903	87-010-322-080		C-CAP,S 100P-50 CH
CN1	87-A61-142-010		CONN,7P V THL-P07-A1
CN91	87-A60-619-010		CONN,2P V 2MM JMT
CN601	87-A60-902-010		CONN,14P V BLK FMN-BTRK
CN701	87-A60-619-010		CONN,2P V 2MM JMT
CN901	87-A60-770-010		CONN,18P B TMC-D(X)
CN902	87-A60-957-010		CONN,9P V TOC-B
CN903	87-A60-189-010		CONN,16P V TUC-P16P-B1
CN905	87-A61-258-010		CONN,15P V 52806-1510
CNA701	8A-CJ5-634-010		CONN ASSY,2P SHLD
FB701	87-A50-189-080		C-COIL,S BLM21B272S
FC601	8A-CJ5-633-010		CABLE,FFC 14P-1.0-10
FC902	8A-CJ5-632-010		CABLE,FFC 9P-1.0-20
FC905	8A-CJ5-630-010		CABLE,FFC 15P-1.0-20

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
J201	87-A60-238-010		TERMINAL,SP 4P(MSC)
J202	87-099-801-010		JACK,PIN 1P BLK
J601	87-A60-881-010		JACK,PIN 2P MSP 242V05 PBSN
J602	87-A60-881-010		JACK,PIN 2P MSP 242V05 PBSN
JW002	87-008-372-080		FLTR,EMI BL01RN1
L101	87-A50-333-010		COIL,OSC 9.43MHZ
⚠ PR1	87-A90-393-080		PROTECTOR,0.5A 60V 491
⚠ PR2	87-026-689-080		PROTECTOR,1A 60V 491
⚠ PR3	87-A90-195-080		PROTECTOR 7A 125V 49
⚠ PR4	87-A90-195-080		PROTECTOR 7A 125V 49
⚠ PR5	87-026-689-080		PROTECTOR 1A 60V 491
FRONT C.B			
C102	87-010-415-040		CAP,E 10-50
C103	87-012-157-080		C-CAP,S 330P-50 CH
C104	87-010-421-040		CAP,E 4.7-50 5L
C105	87-010-421-040		CAP,E 4.7-50 5L
C106	87-010-408-040		CAP,E 47-50 SME
C107	87-012-369-080		C-CAP,S 0.047-50F
C108	87-010-197-080		CHIP CAPACITOR,0.01-25
C109	87-010-197-080		CHIP CAPACITOR,0.01-25
C110	87-010-196-080		CHIP CAPACITOR,0.1-25
C111	87-012-368-080		C-CAP,S 0.1-50 ZF
C301	87-010-196-080		CHIP CAPACITOR,0.1-25
CN101	87-A60-778-010		CONN,18P B TMC-D(P)
CN102	87-A60-114-010		CONN,4P H S2M-4WR
FL101	8A-CJ5-608-010		FL,9-ST-18GONK
LED101	87-A40-317-080		LED,SLR-342VCT31 RED
LED301	87-A40-786-080		LED,SMLS1BE16WTP4 BLU/UMB
LED302	87-A40-786-080		LED,SMLS1BE16WTP4 BLU/UMB
LED303	87-A40-786-080		LED,SMLS1BE16WTP4 BLU/UMB
R102	87-022-355-080		C-RES,S10K-1/10W F
R103	87-022-355-080		C-RES,S10K-1/10W F
S102	87-A91-426-010		SW,RTRY 3-2-1 RE01311-2-12PCE
S201	87-A90-095-080		SW,TACT EVQ11G04M
S202	87-A90-095-080		SW,TACT EVQ11G04M
S203	87-A90-095-080		SW,TACT EVQ11G04M
S204	87-A90-095-080		SW,TACT EVQ11G04M
S205	87-A90-095-080		SW,TACT EVQ11G04M
S206	87-A90-095-080		SW,TACT EVQ11G04M
S207	87-A90-095-080		SW,TACT EVQ11G04M
S208	87-A90-095-080		SW,TACT EVQ11G04M
S209	87-A90-095-080		SW,TACT EVQ11G04M
S210	87-A90-095-080		SW,TACT EVQ11G04M
S211	87-A90-095-080		SW,TACT EVQ11G04M
S212	87-A90-095-080		SW,TACT EVQ11G04M
S213	87-A90-095-080		SW,TACT EVQ11G04M
S214	87-A90-095-080		SW,TACT EVQ11G04M
S215	87-A90-095-080		SW,TACT EVQ11G04M
S216	87-A90-095-080		SW,TACT EVQ11G04M
AC C.B			
⚠ C1	87-A10-479-080		CAP,CER 2200P-250 M E KH
C14	87-010-388-080		CAP,E 1000-25 11L SME
C16	87-010-496-080		CAP,E 3.3-50 5L
⚠ CN1	87-A60-645-010		CONN,3P V VH
CN2	87-A60-620-010		CONN,3P V 2MM JMT
⚠ PT1	8Z-NF8-659-010		PT,SUB ZNF-8(E) TAM
⚠ RY1	87-A90-977-010		RELAY,AC12V DG12D1-0(M)
⚠ T1	87-A60-317-010		TERMINAL, 1P MSC
⚠ T2	87-A60-317-010		TERMINAL, 1P MSC
HP JACK C.B			
J101	87-A60-420-010		JACK,3.5 ST (MSC)
TUNER C.B			

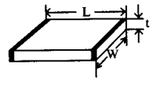
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C701	87-010-381-080		CAP,ELECT 330-16V
C702	87-010-404-080		CAP,ELECT 4.7-50V
C703	87-012-286-080		CAP,U 0.01-25
C704	87-012-286-080		CAP,U 0.01-25
C709	87-012-195-080		C-CAP,U 100P-50CH
C711	87-010-260-080		CAP,ELECT 47-25V
C712	87-010-831-080		C-CAP,U,0.1-16F
C713	87-012-286-080		CAP,U 0.01-25
C714	87-012-286-080		CAP,U 0.01-25
C715	87-012-195-080		C-CAP,U 100P-50CH
C717	87-012-286-080		CAP,U 0.01-25
C719	87-012-286-080		CAP,U 0.01-25
C720	87-012-195-080		C-CAP,U 100P-50CH
C721	87-012-176-080		CAP,15P
C722	87-012-176-080		CAP,15P
C723	87-012-274-080		CHIP CAP,U 1000P-50B
C725	87-018-131-080		CAP,TC U 1000P-50 KB
C727	87-010-196-080		CHIP CAPACITOR,0.1-25
C728	87-010-248-080		CAP,ELECT 220-10V
C729	87-012-274-080		CHIP CAP,U 1000P-50B
C731	87-012-286-080		CAP,U 0.01-25
C733	87-012-280-080		C-CAP,U 3300P-50 KB
C734	87-012-280-080		C-CAP,U 3300P-50 KB
C752	87-012-282-080		C-CAP,U 4700P-50 KB
C753	87-012-195-080		C-CAP,U 100P-50 J CH
C755	87-012-286-080		CAP,U 0.01-25
C756	87-012-286-080		CAP,U 0.01-25
C757	87-012-188-080		C-CAP,U 47P-50 CH
C758	87-012-167-080		C-CAP,U 5P-50 CH
C761	87-010-196-080		C-CAP,S 0.1-25 ZF
C762	87-012-286-080		CAP,U 0.01-25
C763	87-010-829-080		CAP,U 0.047-16
C765	87-012-286-080		CAP,U 0.01-25
C766	87-010-197-080		C-CAP,S 0.01-25 KB
C768	87-012-286-080		CAP,U 0.01-25
C769	87-010-260-080		CAP,ELECT 47-25V
C770	87-010-829-080		CAP,U 0.047-16
C771	87-010-383-080		CAP,ELECT 33-25V
C772	87-010-829-080		CAP,U 0.047-16
C773	87-010-196-080		CHIP CAPACITOR,0.1-25
C774	87-010-263-080		CAP,ELECT 100-10V
C775	87-010-404-080		CAP,ELECT 4.7-50V
C776	87-012-286-080		CAP,U 0.01-25
C777	87-010-493-080		CAP,E 0.47-50 M 5L SRE
C778	87-010-401-080		CAP,ELECT 1-50V
C779	87-010-401-080		CAP,ELECT 1-50V
C780	87-010-196-080		CHIP CAPACITOR,0.1-25
C781	87-010-405-080		CAP,ELECT 10-50V
C782	87-010-405-080		CAP,ELECT 10-50V
C783	87-012-286-080		CAP,U 0.01-25
C784	87-012-286-080		CAP,U 0.01-25
C785	87-010-402-080		CAP,ELECT 2.2-50V
C786	87-010-402-080		CAP,ELECT 2.2-50V
C787	87-012-275-080		C-CAP,U 1200P-50 B
C788	87-012-275-080		C-CAP,U 1200P-50 B
C789	87-012-275-080		C-CAP,U 1200P-50 B
C790	87-012-275-080		C-CAP,U 1200P-50 B
C791	87-010-405-080		CAP,ELECT 10-50V
C793	87-012-273-080		C-CAP,U 820P-50 B
C794	87-010-406-080		CAP,ELECT 22-50
C795	87-010-596-080		CAP,S 0.047-16
C796	87-010-403-080		CAP,ELECT 3.3-50V
C797	87-012-276-080		C-CAP,U 1500P-50 KB
C798	87-012-276-080		C-CAP,U 1500P-50 KB
C799	87-010-829-080		CAP,U 0.047-16
C812	87-012-286-080		CAP,U 0.01-25
C814	87-012-286-080		CAP,U 0.01-25
C820	87-010-260-080		CAP,ELECT 47-25V
C821	87-012-286-080		CAP,U 0.01-25
C822	87-012-286-080		CAP,U 0.01-25
C823	87-012-286-080		CAP,U 0.01-25
C828	87-010-196-080		CHIP CAPACITOR,0.1-25
C829	87-010-196-080		CHIP CAPACITOR,0.1-25
C859	87-012-286-080		C-CAP,U 0.01-25 KB
C861	87-012-199-080		C-CAP,U 220P-50 J CH
C862	87-012-199-080		C-CAP,U 220P-50 J CH
C863	87-012-270-080		C-CAP,U 470P-50 KB
C864	87-010-405-080		CAP,E 10-50 M 11L SME
C865	87-010-196-080		C-CAP,S 0.1-25 ZF
C866	87-010-405-080		CAP,E 10-50 M 11L SME
C867	87-012-286-080		C-CAP,U 0.01-25 KB
C868	87-012-184-080		C-CAP,U 33P-50 J CH
C869	87-012-180-080		C-CAP,U 22P-50 J CH
C940	87-012-286-080		C-CAP,U 0.01-25 KB
C942	87-012-168-080		C-CAP,U 6P-50 D CH
C947	87-012-286-080		C-CAP,U 0.01-25 KB
C949	87-A10-039-080		C-CAP,U 470P-50 J CH
C952	87-012-286-080		C-CAP,U 0.01-25 KB
C958	87-010-197-080		C-CAP,S 0.01-25 KB
C959	87-010-831-080		C-CAP,U 0.1-16 ZF
C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C962	87-010-401-080		CAP,E 1-50 M 11L SME
CF801	87-008-423-010		FLTR,CF SFE10.7MS3G-A
CF802	82-785-747-010		CF,MS2 GHY R
CN701	87-A60-650-010		CONN,16P H GRY TUC-P16X-C1
FFE801	A8-6ZA-191-130		6ZA-1 FEENM
J801	87-033-241-010		TERMINAL,ANT 2P AJ-2039
L771	87-A50-266-010		COIL,FM DET-2N(TOK)
L772	87-A91-110-010		FLTR,PCFJZH-450(TOK)
L781	87-005-847-010		COIL,2.2UH K CECS
L791	87-A50-027-010		COIL,1 POLE MPX(TOK)
L792	87-A50-027-010		COIL,1 POLE MPX(TOK)
L832	87-005-847-080		COIL,2.2UH K CECS
L851	87-005-847-080		COIL,2.2UH K CECS
L941	87-A50-020-010		COIL,ANT LW(COI)252KHZ
L942	87-A50-019-010		COIL,OSC LW(COI) 856KHZ
L981	8Z-ZA1-665-010		COIL,AM PACK 2(TOK)
TC942	87-011-164-010		TRIMMER,CER 30P 4.5X3.9 VCT31
X721	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309
X851	87-A70-091-010		VIB,XTAL 4.332MHZ CSA-309

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

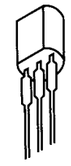
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	±5%	CJ		1.0	0.5	0.35	104
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION



E C B

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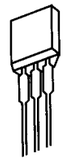
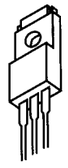
KTA1266
KTC3198



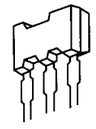
E C B

DTC114ES
KTC3199



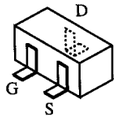
B C E

2SB1370

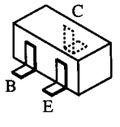


E C B

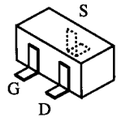
2SD1858TV2



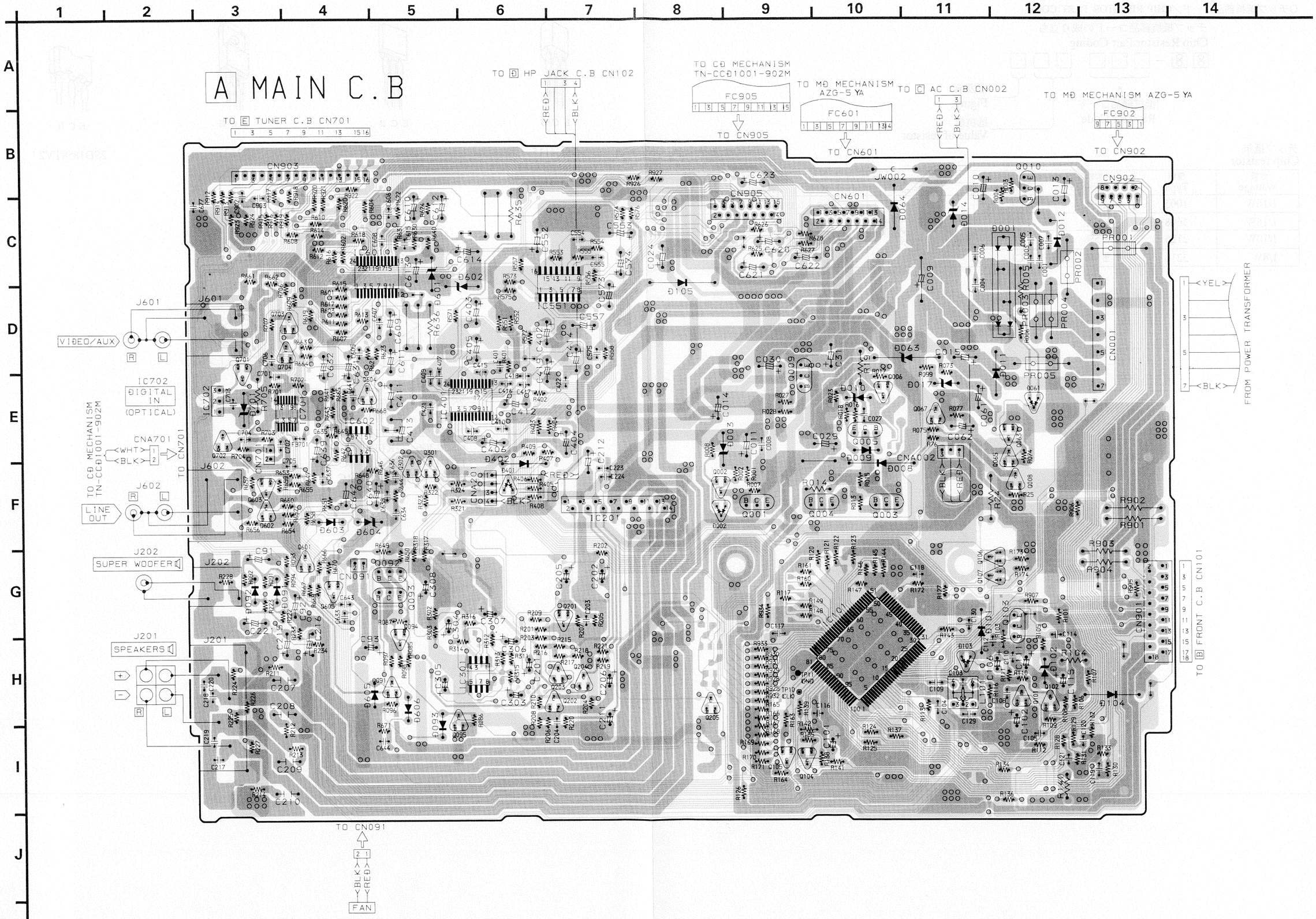
2SK2158



2SA1235 DTA144EK
2SC2714 DTA144TK
2SC3052 RT1N144C
CSD1306 RT1P141C
DTC144EK RT1P144C
DTC124EKA RT1N141C



2SK543(4/5)


A MAIN C.B
TO E TUNER C.B CN701
TO D HP JACK C.B CN102
TO CD MECHANISM TN-CCD1001-902M
FC905
TO CN905
TO MD MECHANISM AZG-5 YA
FC601
TO CN601
TO C AC C.B CN002
TO MD MECHANISM AZG-5 YA
FC902
TO CN902
FROM POWER TRANSFORMER
TO B FRONT C.B CN101
VIDEO/AUX
IC702 DIGITAL IN (OPTICAL)
LINE OUT
J202 SUPER WOOFER
J201 SPEAKERS
TO CN091
FAN
IC551
IC201
IC701
IC602
IC301
IC101
CN903
CN905
CN601
CN902
CN091
CN001
CN101
CNA701
CNA002
CNA201
JW002
PR001
PR002
PR003
PR004
PR005

A MAIN C·B 1/2 (AMP SECTION)

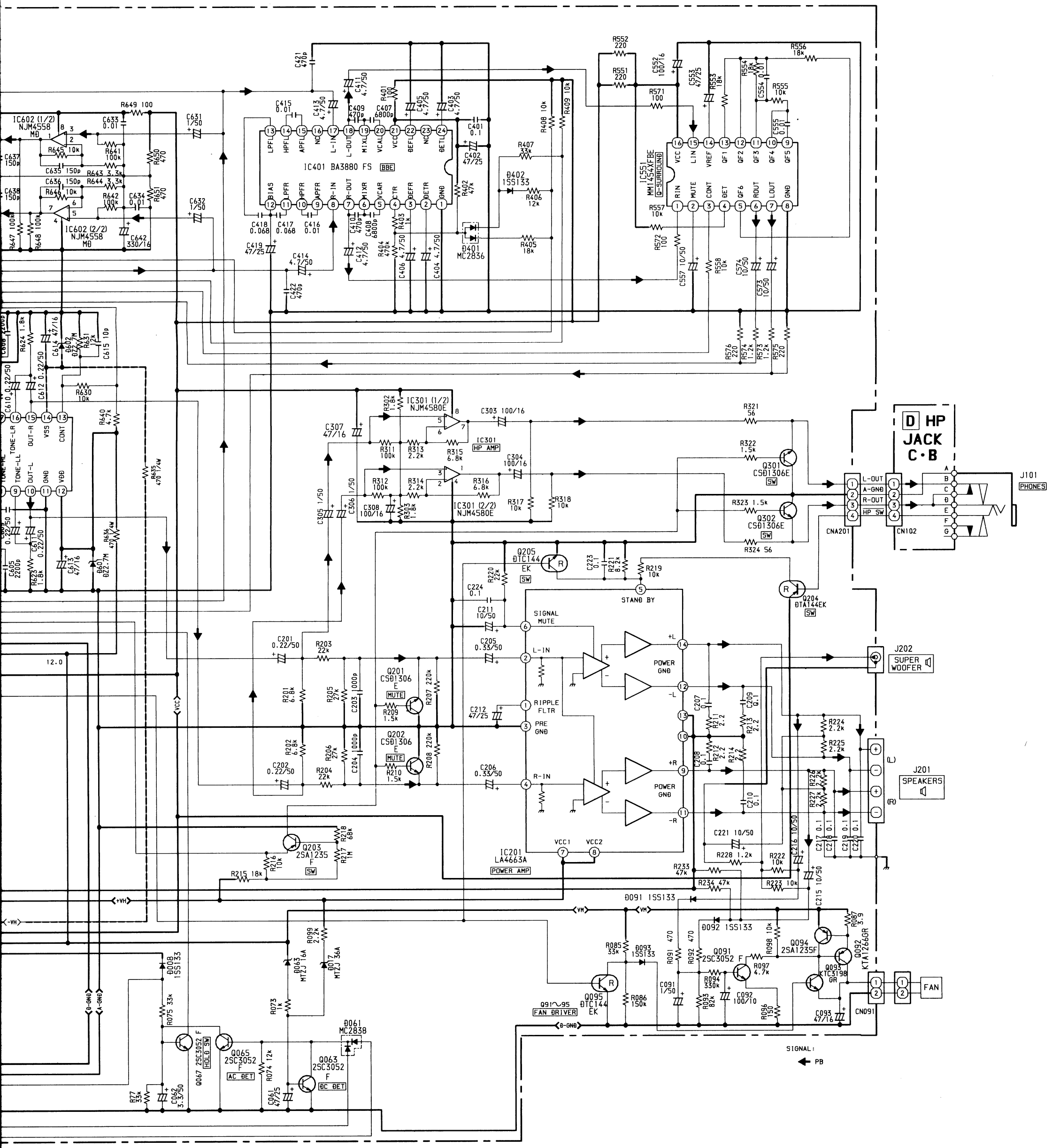
J601 L R VIDEO/AUX
J602 L R LINE OUT
R661 1k
R662 1k
R657 1k
R659 3.3k
R653 3.3k
R655 47k
R658 47k
R654 47k
R656 1k
R660 3.3k
R652 3.3k
Q603 CSD1306E BUFFER
Q602 CSD1306E BUFFER
D603 1SS133
D604 HZS6C2L
Q601 DTA144TK SW
C677 56p
C620 33/50
C621 33/50
C623 2.2/50
C622 2.2/50
R628 3.9k
R626 4.7k
R625 4.7k
R627 3.9k
D606 1SS133
C643 1
R669 3.3k
R667 3.9k
R666 270k
Q604 2SC3052 F
Q605 2SC3052 F
Q604, 605 SPECTRUM ANALYZER
R671 470k
C644 0.1
D605 1SS133
R670 1k
R668 47
R665 1k
C641 0.1
R663 22k
R664 22k
IC602 LINE OUT AMP
C639 4.7/50
C640 4.7/50
IC602 (1/2) NJM4558 MD
IC602 (2/2) NJM4558 MD
R649 100
C631 1/50
C633 0.01
R650 470
R645 10k
R641 100k
C637 150p
C635 150p
R643 3.3k
C636 150p
R644 3.3k
R646 10k
C638 150p
R642 100k
C634 0.01
R651 470
C632 1/50
R647 100k
R648 100k
C642 330/16
R610 68k
R608 5.6k
R604 12k
R602 12k
R601 12k
R603 12k
R607 5.6k
R609 68k
R612 2.2k
R614 680
R616 680
R618 1.5k
R620 6.8k
R622 6.8k
C606 2200p
R624 1.8k
C614 47/16
D602 DZ2.7M
R631 12k
C615 10p
C612 0.22/50
R630 10k
C608 0.015
C610 0.22/50
R640 4.7k
IC601 M62495 FP FUNCTION VOL
(24) CD-R (23) MD-R (22) TAPE-R (21) TUN-R (20) AUX-R (19) SOUT-R (18) VIN-R (17) TONE-HR (16) TONE-LR (15) OUT-R (14) VSS (13) CONT
(1) CD-L (2) MD-L (3) TAPE-L (4) TUN-L (5) AUX-L (6) SOUT-L (7) VIN-L (8) TONE-HL (9) TONE-LL (10) OUT-L (11) GND (12) VDD
R635 470 1/4W
C607 0.015
C609 0.22/50
C611 0.22/50
R636 470 1/4W
R621 6.8k
C605 2200p
R623 1.8k
C613 47/16
D601 DZ2.7M
R611 2.2k
R613 680
R615 680
R617 1.5k
R619 6.8k

TO/FROM A MAIN C.B 2/2 (MICRO CONTROLLER SECTION)

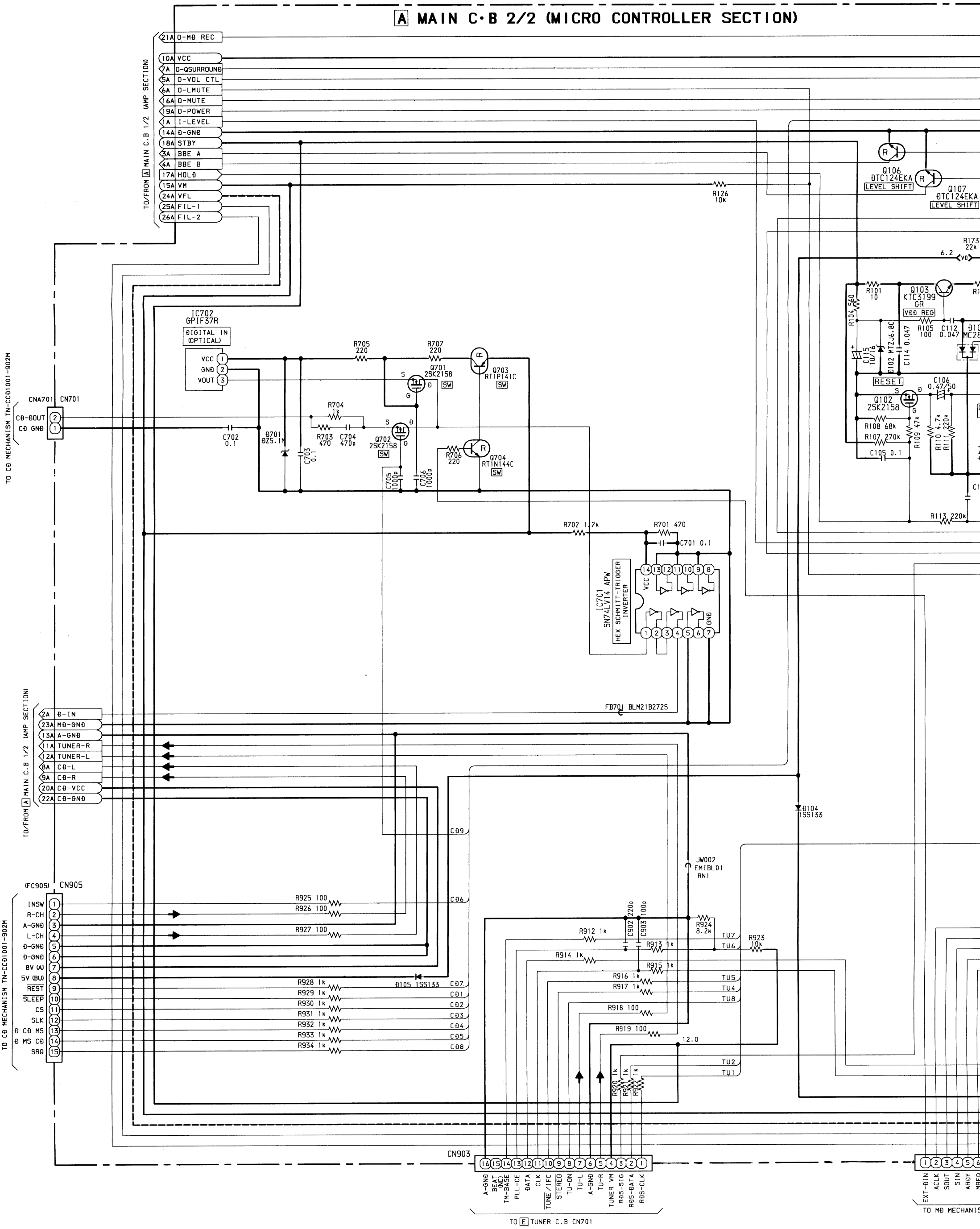
1A I-LEVEL
2A D-IN
3A BBE A
4A BBE B
5A D-VOL CTL
6A D-LMUTE
7A D-QSURROUND
8A CD-L
9A CD-R
10A VCC
11A TUNER-R
12A TUNER-L
13A A-GND
14A D-GND
15A VM
16A D-MUTE
17A HOLD
18A STBY
19A D-POWER
20A CD-VCC
21A D-MD REC
22A CD-GND
23A MD-GND
24A VFL
25A FIL-1
26A FIL-2

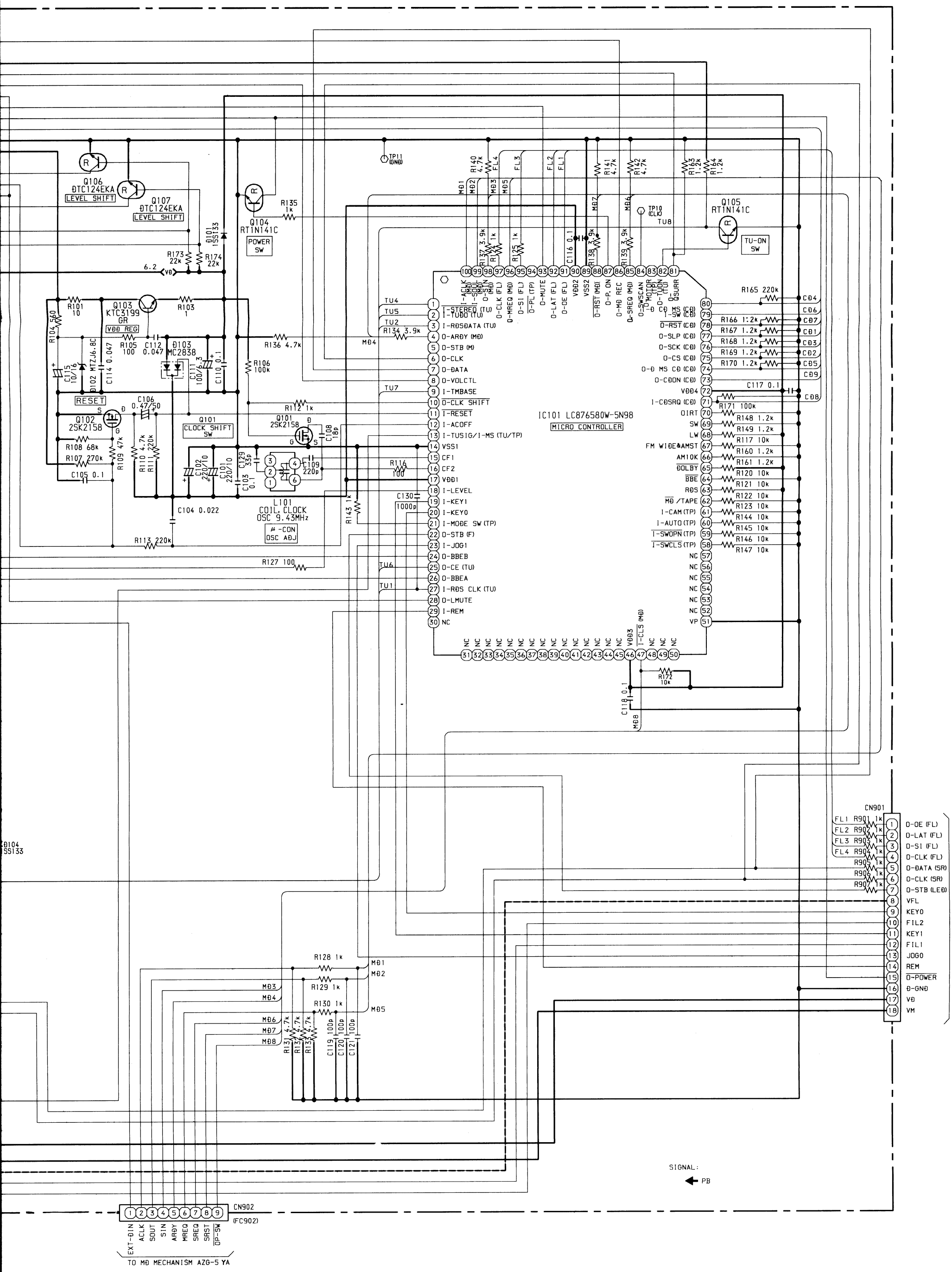
TO MD MECHANISM AZG-5 (YA)
CN601 (FC601)
MD-GND 14
MD-VM 13
D-GND 12
NC 11
D-IN 10
D-GND 9
A-GND 8
A-IN L 7
A-IN R 6
A-GND 5
A-OUT L 4
A-OUT R 3
A-GND 2
A-MUTE (NC) 1

D064 1N4003
12.0
C024 220/16
CD-GND
-27
8.2
Q001 2SB1370 E REG
R007 680
D002 MC2840
Q002 2SC3052 F REG
R001 470
R002 47
C014 470/16
C01 47/16
D003 MTZJ8.2C
C008 0.1
R008 680
Q010 2SD1858TV2 VFL REG
PR001 0.5A 60V
PR002 1A 60V
D012 1N4003
R003 3.3k
R004 100
C013 100/50
C007 0.047
D014 MTZJ 27B
C010 220/50
CN001
FIL-1 7
FIL-2 6
+30V 5
+16V 4
0V 3
-7V 2
0V 1
FROM POWER TRANSFORMER
D001 GBU6JL6131
20.0
PR003 7A 60V
PR004 7A 60V
PR005 1A 60V
C001 0.047
C003 0.1
C005 0.1
C006 0.1
C004 0.1
C009 6800/25
D011 1N4003
C015 470/25
-7.0
+VH
-VH
VM
Q003 2SB1370 E VM REG
Q004 2SB1370 E VM REG
R013 470
R014 470
R015 47k
R019 10k
12.0
Q005 KTC3198 GR
D009 1SS133
Q006 2SC3052 F
Q005, 0006 CONST. VOLT REG
C027 470p
R023 470
D010 MTZJ 10C
C029 100/50
R016 68
R018 4.7k
R017 220
R005 33k
R006 33k
STBY
D-POW
R024 10k
R025 2.2k
Q008 2SA1235 F POWER SW
Q009 CSC4115 BC VCC SW
R027 470
R028 100
C030 100/16
C031 470/16
10.9
R76 1k
D-GND
A-GND
D008 1SS133
R075 33k
Q067 2SC3052 F HOLD SW
R77 33k
C062 3.3/50
VCC
CNA002
TO C AC C.B CN002
STBY 1
RELAY 2
GND 3
12.0


IC602 (1/2) NJM4558 MD
IC602 (2/2) NJM4558 MD
IC401 BA3880 FS BBE
LPFL HPFL APFL NC L-IN L-OUT M1XL VCAL VCC DETL NC DETL
BIAS LPFR HPFR APFR R-IN R-OUT M1XR VCAR CTR DEFR DETR GND
IC551 MM1454XFBE G-SURROUND
VCC L IN VREF QF1 QF2 QF3 QF4 QF5
R IN MUTE CONT DET QF6 ROUT LOUT GND
D401 MC2836
D402 1SS133
IC301 (1/2) NJM4580E
IC301 (2/2) NJM4580E
IC301 HP AMP
Q301 CSD1306E
Q302 CSD1306E
SW
CNA201
L-OUT A-GND R-OUT HP SW
CN102
J101 PHONES
D HP JACK C·B
Q205 DTC144 EK
Q204 DTA144EK
STAND BY
SIGNAL MUTE
L-IN
RIPPLE FLTR
PRE GND
R-IN
Q201 CSD1306 E
Q202 CSD1306 E
MUTE
IC201 LA4663A
POWER AMP
POWER GND
+L -L +R -R
VCC1 VCC2
J202 SUPER WOOFER
J201 SPEAKERS
(L) (R)
Q203 2SA1235 F
D091 1SS133
D092 1SS133
Q091 2SC3052 F
Q092 KTA1266GR
Q093 KTC3198 GR
Q094 2SA1235F
Q095 DTC144 EK
Q091~95 FAN DRIVER
CN091
FAN
D008 1SS133
D063 MTZJ 16A
D017 MTZJ 36A
D061 MC2838
Q065 2SC3052 F
Q067 2SC3052 F
HOLD SW
AC DET
Q063 2SC3052 F
DC DET
SIGNAL:
PB
+VH -VH VCC VM D-GND A-GND

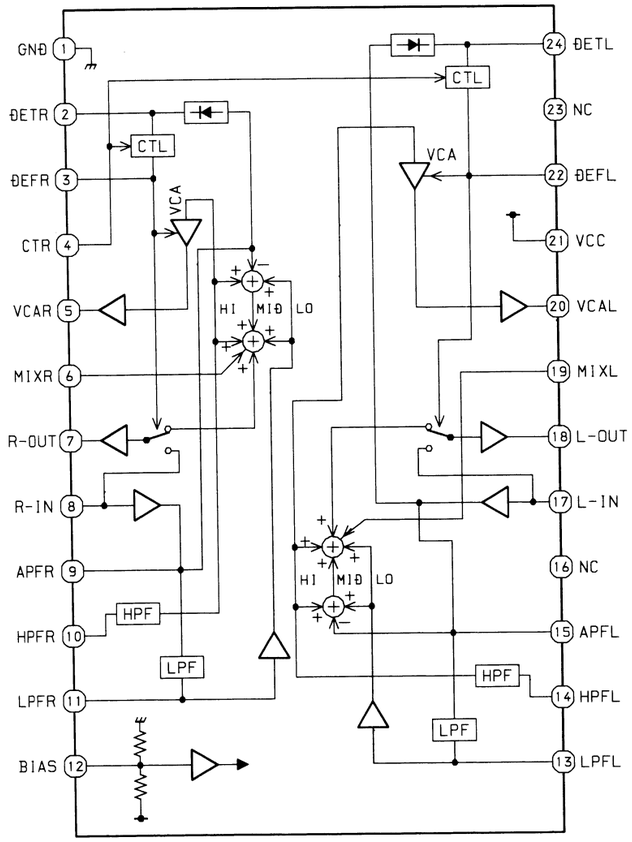
SCHEMATIC DIAGRAM – 2 (MAIN 2 / 2 : MICRO CONTROLLER SECTION)



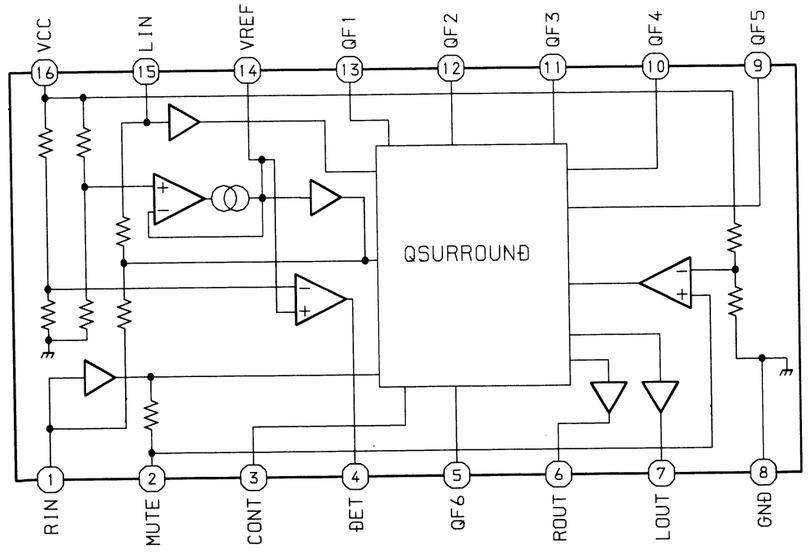

Q106 DTC124EKA LEVEL SHIFT
Q107 DTC124EKA LEVEL SHIFT
Q104 RT1N141C POWER SW
Q105 RT1N141C TU-ON SW
TP11 (GND)
TP10 (CLK)
TU8
D101 1SS133
R173 22k
R174 22k
6.2 VD
R135 1k
R101 10
Q103 KTC3199 GR
VDD REG
R103 1
R104 560
R105 100
C112 0.047
D103 MC2838
R136 4.7k
R106 100k
C115 10/16
D102 MTZJ6.8C
C114 0.047
C111 100/6.3
C110 0.1
RESET
C106 0.47/50
Q102 2SK2158
Q101 CLOCK SHIFT SW
Q101 2SK2158
C108 18p
R108 68k
R107 270k
R109 47k
R110 4.7k
R111 220k
C105 0.1
C102 220/10
C101 220/10
C103 0.1
C129 33p
C109 220p
C104 0.022
L101 COIL, CLOCK OSC 9.43MHz
μ-CON OSC ADJ
R113 220k
R112 1k
R116 100
R143 1k
R127 100
C130 1000p
IC101 LC876580W-5N98
MICRO CONTROLLER
R140 4.7k
R141 4.7k
R142 4.7k
R163 1.2k
R164 1.2k
R137 3.9k
R138 3.9k
R139 3.9k
R125 1k
C116 0.1
R165 220k
R166 1.2k
R167 1.2k
R168 1.2k
R169 1.2k
R170 1.2k
C117 0.1
R171 100k
R148 1.2k
R149 1.2k
R117 10k
R160 1.2k
R161 1.2k
R120 10k
R121 10k
R122 10k
R123 10k
R144 10k
R145 10k
R146 10k
R147 10k
R172 10k
C118 0.1
R134 3.9k
TU4
TU5
TU2
TU7
TU6
TU1
MD1
MD2
MD3
MD4
MD5
MD6
MD7
MD8
I-STEREO (TU)
I-TUDO (TU)
I-RDSDATA (TU)
O-ARDY (MD)
O-STB (M)
O-CLK
O-DATA
O-VOLCTL
I-TMBASE
O-CLK SHIFT
I-RESET
I-ACOFF
I-TUSIG/I-MS (TU/TP)
VSS1
CF1
CF2
VDD1
I-LEVEL
I-KEY1
I-KEY0
I-MODE SW (TP)
O-STB (F)
I-JOG1
O-BBEB
O-CE (TU)
O-BBEA
I-RDS CLK (TU)
O-LMUTE
I-REM
NC
O-ACLK (MD)
I-SOUT (MD)
O-SIN (MD)
O-CLK (FL)
O-MREQ (MD)
O-SI (FL)
O-PL (TP)
O-MUTE
O-LAT (FL)
O-OE (FL)
VDD2
VSS2
O-RST (MD)
O-P. ON
O-MD REC
O-SREQ (MD)
O-SWSCAN
O-MOTOR
O-TUON (TU)
O-DSUAR
I-CLS (MD)
VDD3
VP
O-D CD MS (CD)
I-SW (CD)
O-RST (CD)
O-SLP (CD)
O-SCK (CD)
O-CS (CD)
O-D MS CD (CD)
O-CDON (CD)
VDD4
I-CDSRQ (CD)
OIRT
SW
LW
FM WIDE&AMST
AM10K
DOLBY
BBE
RDS
MD /TAPE
I-CAM (TP)
I-AUTO (TP)
I-SWOPN (TP)
I-SWCLS (TP)
CN901
FL1 R901 1k
FL2 R902 1k
FL3 R903 1k
FL4 R904 1k
R905 1k
R906 1k
R907 1k
O-OE (FL)
O-LAT (FL)
O-SI (FL)
O-CLK (FL)
O-DATA (SR)
O-CLK (SR)
O-STB (LED)
VFL
KEY0
FIL2
KEY1
FIL1
JOG0
REM
O-POWER
D-GND
VD
VM
TO B FRONT C.B CN101
R128 1k
R129 1k
R130 1k
R131 4.7k
R132 4.7k
R133 4.7k
C119 100p
C120 100p
C121 100p
SIGNAL:
PB
CN902
(FC902)
EXT-DIN
ACLK
SOUT
SIN
ARDY
MREQ
SREQ
SRST
OP-SW
TO MD MECHANISM AZG-5 YA

IC BLOCK DIAGRAM – 1

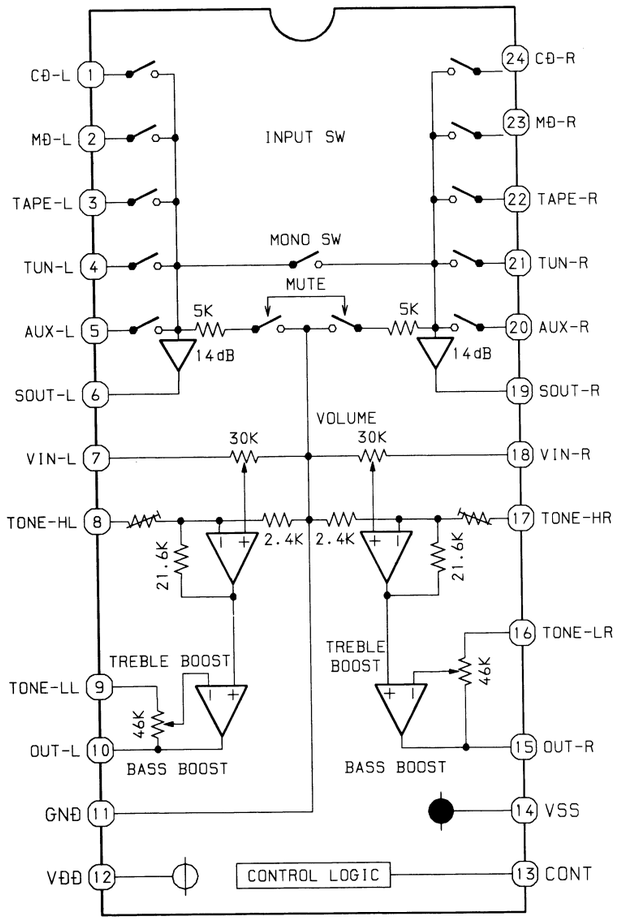
IC, BA3880FS



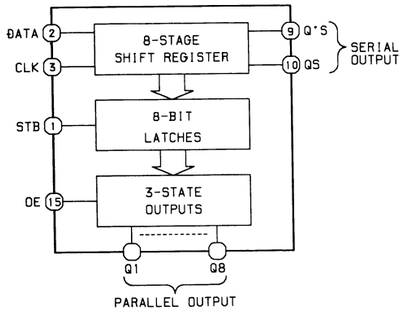
IC, MM1454XFBE



IC, M62495FP



IC, BU4094BCF



TRUTH TABLE

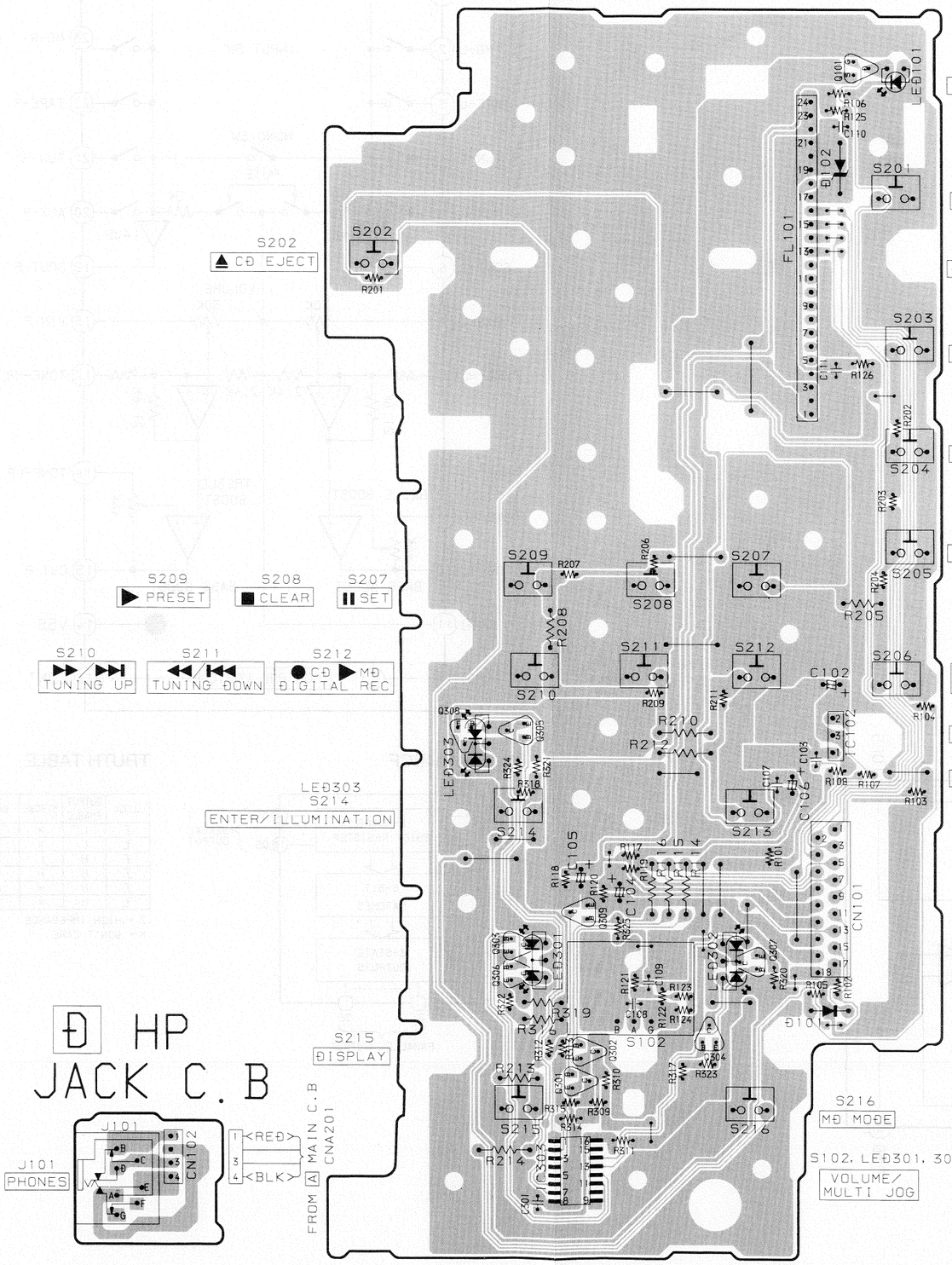
CLOCK	OUTPUT ENABLE	STROBE	DATA	PARALLEL OUTPUTS		SERIAL OUTPUTS	
				Q1	Qn	QS	Q'S
↓	L	x	x	Z	Z	Q7	NO CHG.
↑	L	x	x	Z	Z	NO CHG.	QS
↓	H	L	x	NO CHG.	NO CHG.	Q7	NO CHG.
↓	H	H	L	L	Qn-1	Q7	NO CHG.
↓	H	H	H	H	Qn-1	Q7	NO CHG.
↑	H	x	x	NO CHG.	NO CHG.	NO CHG.	QS

Z = HIGH IMPEDANCE
x = DON'T CARE

1 2 3 4 5 6 7 8 9 10 11 12 13 14

A B C D E F G H I J

B FRONT C.B


LED101
STANDBY
S201
POWER
FL101
DISPLAY
S203
DEMO/MODE (POWER)
S204
FUNCTION
S205
TUNER/BAND
S206
MD REC/EDIT
IC102
REMOTE SENSOR
S213
JOG MODE
FROM A MAIN C.B CN901
S216
MD MODE
S102, LED301, 302
VOLUME/MULTI JOG
S202
CD EJECT
S209
PRESET
S208
CLEAR
S207
SET
S210
TUNING UP
S211
TUNING DOWN
S212
CD MD DIGITAL REC
LED303
S214
ENTER/ILLUMINATION
S215
DISPLAY
CN101
S102
D101
Q101
Q102
FL101
IC102
S201
S202
S203
S204
S205
S206
S207
S208
S209
S210
S211
S212
S213
S214
S215
S216
LED101
LED301
LED302
LED303
R106
R125
C110
C102
C111
R126
R202
R203
R204
R205
R206
R207
R208
R209
R210
R211
R212
C105
C104
C106
C107
C108
R102
R103
R104
R105
R107
R108
R109
R117
R118
R119
R120
R121
R122
R123
R124
R201
R213
R214
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R314
R315
R316
R317
R318
R319
R320
R321
R322
R323
R324
R325
C101
C103
C109
C110
C111
C112
C113
C114
C115
C116
C117
C118
C119
C120
C121
C122
C123
C124
C125
C126
C127
C128
C129
C130
C131
C132
C133
C134
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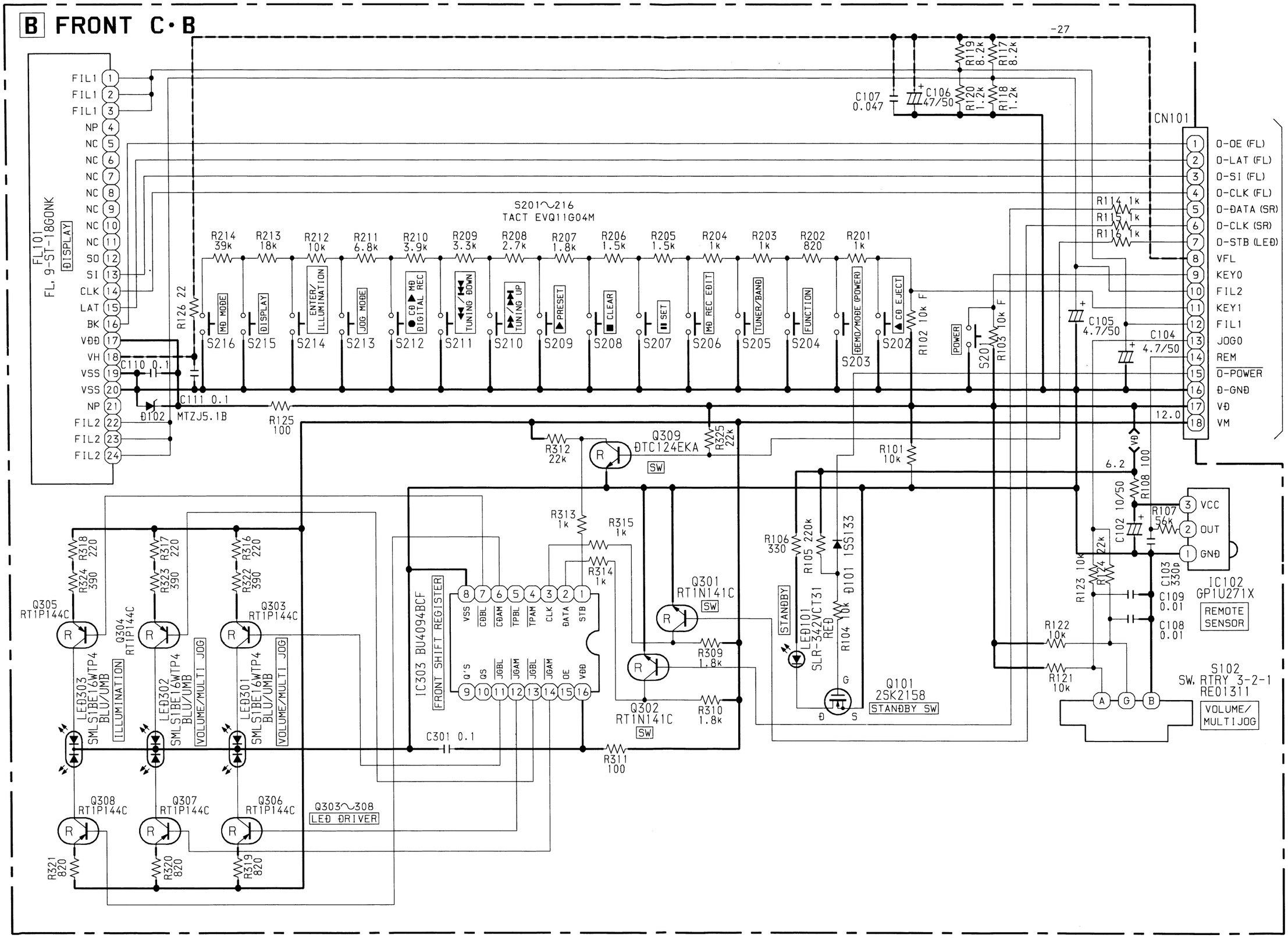
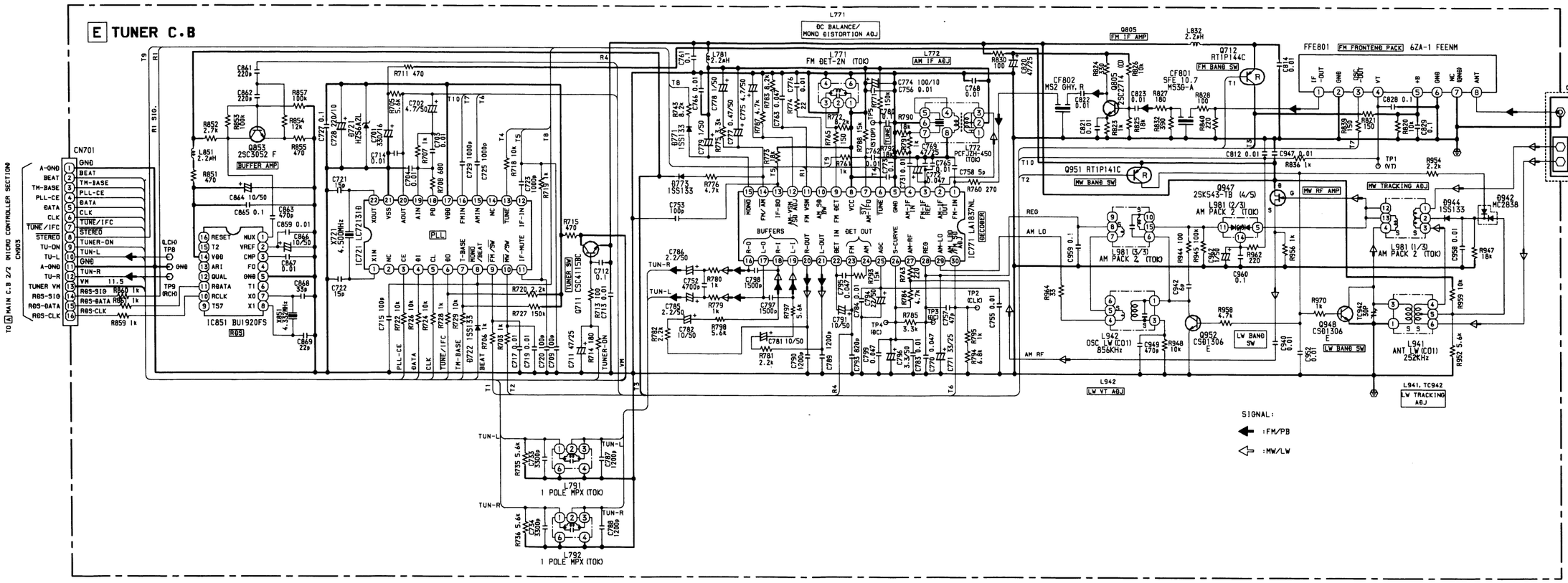
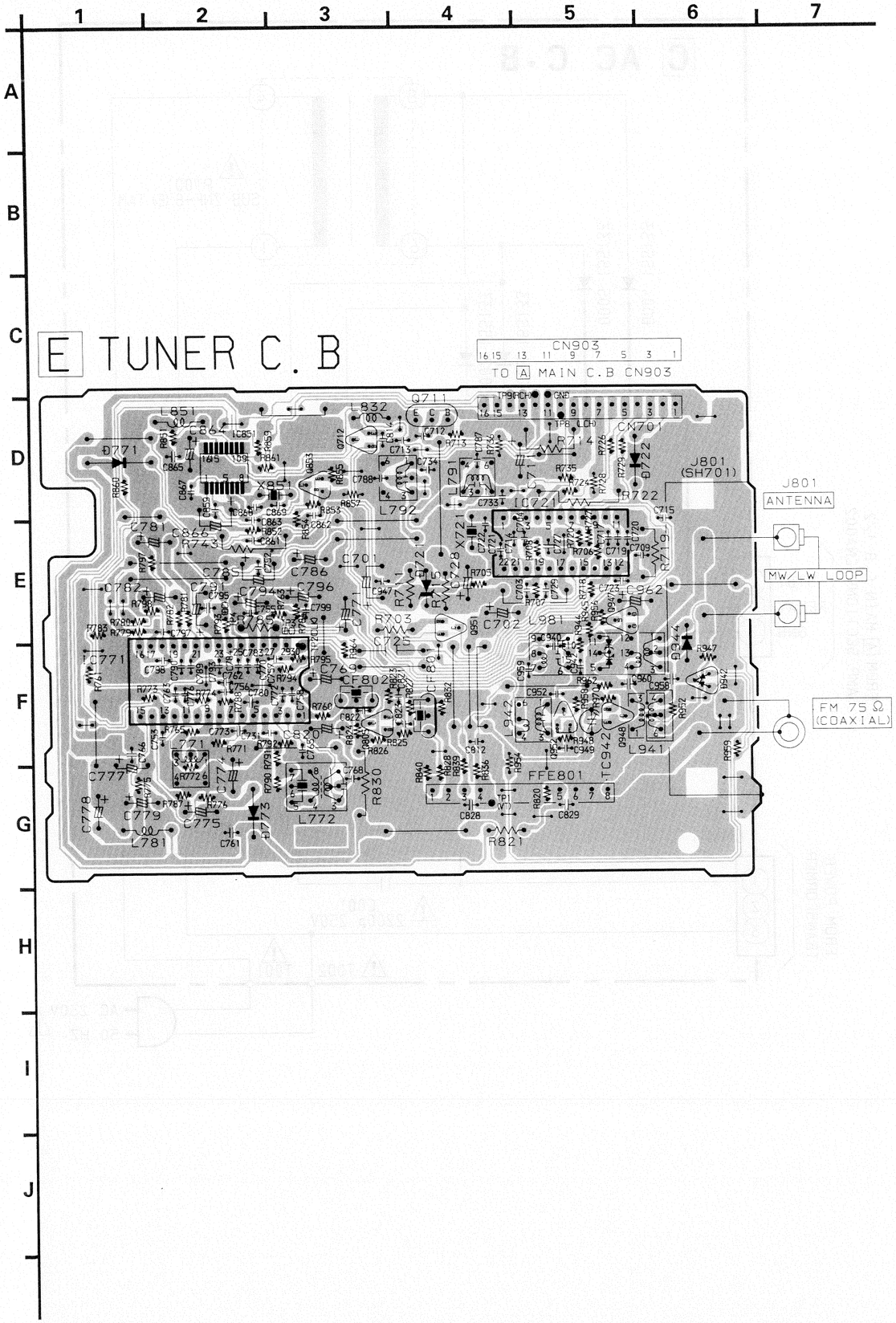
C137
C138
C139
C140
C141
C142
C143
C144
C145
C146
C147
C148


B FRONT C·B
FL101
FL, 9-ST-18GONK
DISPLAY
FIL1
FIL1
FIL1
NP
NC
NC
NC
NC
NC
NC
NC
SO
SI
CLK
LAT
BK
VDD
VH
VSS
VSS
NP
FIL2
FIL2
FIL2
S201~216
TACT EVQ11G04M
R214 39k
R213 18k
R212 10k
R211 6.8k
R210 3.9k
R209 3.3k
R208 2.7k
R207 1.8k
R206 1.5k
R205 1.5k
R204 1k
R203 1k
R202 820
R201 1k
MD MODE
DISPLAY
ENTER/ ILLUMINATION
JOG MODE
CD ▲ MD DIGITAL REC
TUNING DOWN
TUNING UP
PRESET ▲
CLEAR ■
SET II
MD REC EDIT
TUNER/BAND
FUNCTION
DEMO/MODE (POWER)
CD EJECT ▲
S216
S215
S214
S213
S212
S211
S210
S209
S208
S207
S206
S205
S204
S203
S202
R126 22
C110 0.1
C111 0.1
D102
MTZJ5.1B
R125 100
R102 10k F
POWER
S201
R103 10k F
C107 0.047
C106 47/50
R119 8.2k
R120 1.2k
R118 1.2k
R117 8.2k
-27
C105 4.7/50
C104 4.7/50
R114 1k
R115 1k
R116 1k
CN101
O-OE (FL)
O-LAT (FL)
O-SI (FL)
O-CLK (FL)
O-DATA (SR)
O-CLK (SR)
O-STB (LED)
VFL
KEY0
FIL2
KEY1
FIL1
JOG0
REM
O-POWER
D-GND
VD
VM
FROM A MAIN C.B 2/2 (MICRO CONTROLLER SECTION) CN901
12.0
Q309
DTC124EKA
SW
R312 22k
R325 22k
R101 10k
R313 1k
R315 1k
R314 1k
R106 330
R105 220k
D101 1SS133
STANDBY
LED101
SLR-342VCT31
RED
R104 10k
Q101
2SK2158
STANDBY SW
R108 100
C102 10/50
R107 56k
R124 22k
R123 10k
VCC
OUT
GND
IC102
GP1U271X
REMOTE SENSOR
C103 330p
C109 0.01
C108 0.01
R122 10k
R121 10k
S102
SW, RTRY 3-2-1
RE01311
VOLUME/ MULTIJOG
Q305 RT1P144C
Q304 RT1P144C
Q303 RT1P144C
R324 390
R323 390
R322 390
R318 220
R317 220
R316 220
LED303 SML-S1BE16WTP4 BLU/UMB
LED302 SML-S1BE16WTP4 BLU/UMB
LED301 SML-S1BE16WTP4 BLU/UMB
ILLUMINATION
VOLUME/MULTI JOG
VOLUME/MULTI JOG
IC303 BU4094BCF
FRONT SHIFT REGISTER
VSS CDBL CDAM TPBL TPAM CLK DATA STB
Q'S QS JGBL JGAM JGBL JGAM OE VDD
Q301 RT1N141C
SW
Q302 RT1N141C
SW
R309 1.8k
R310 1.8k
C301 0.1
R311 100
Q308 RT1P144C
Q307 RT1P144C
Q306 RT1P144C
Q303~308
LED DRIVER
R321 820
R320 820
R319 820

SCHEMATIC DIAGRAM – 4 (TUNER)

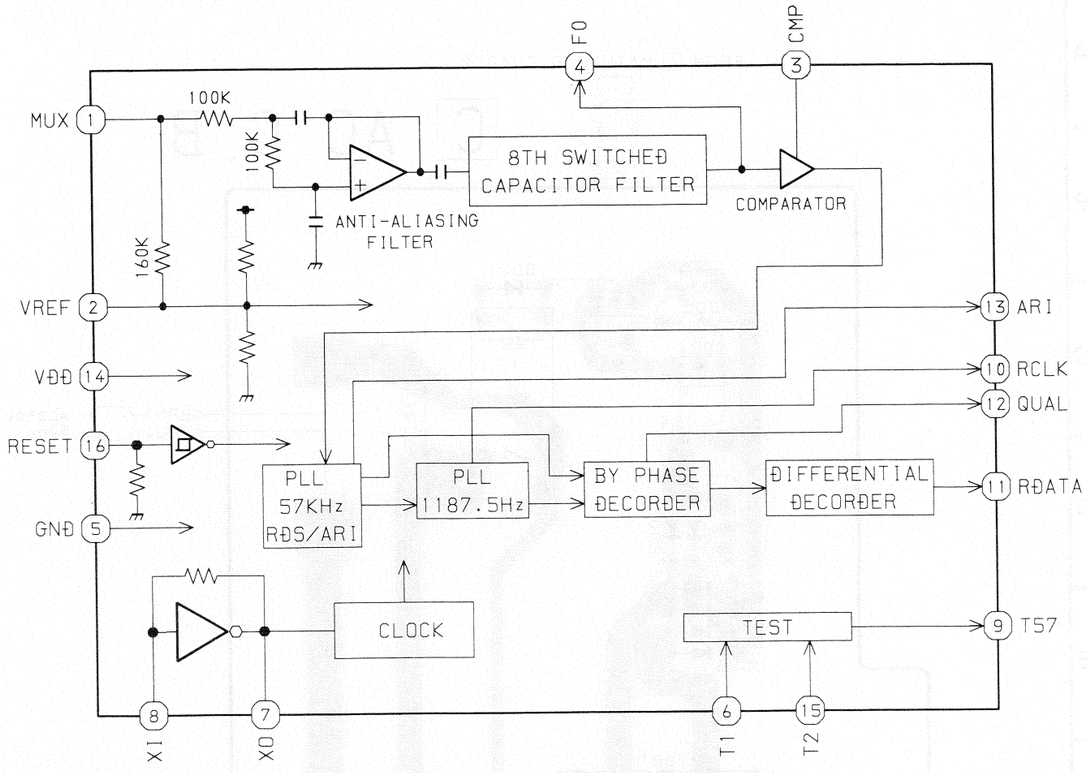


WIRING – 3 (TUNER)

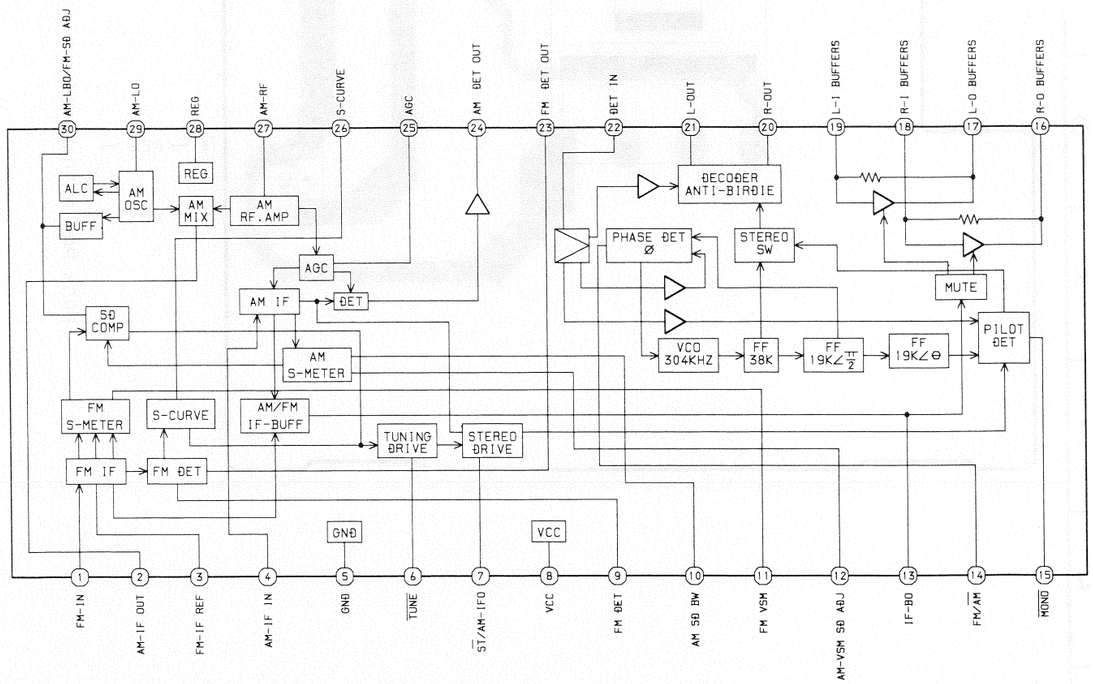


IC BLOCK DIAGRAM – 2

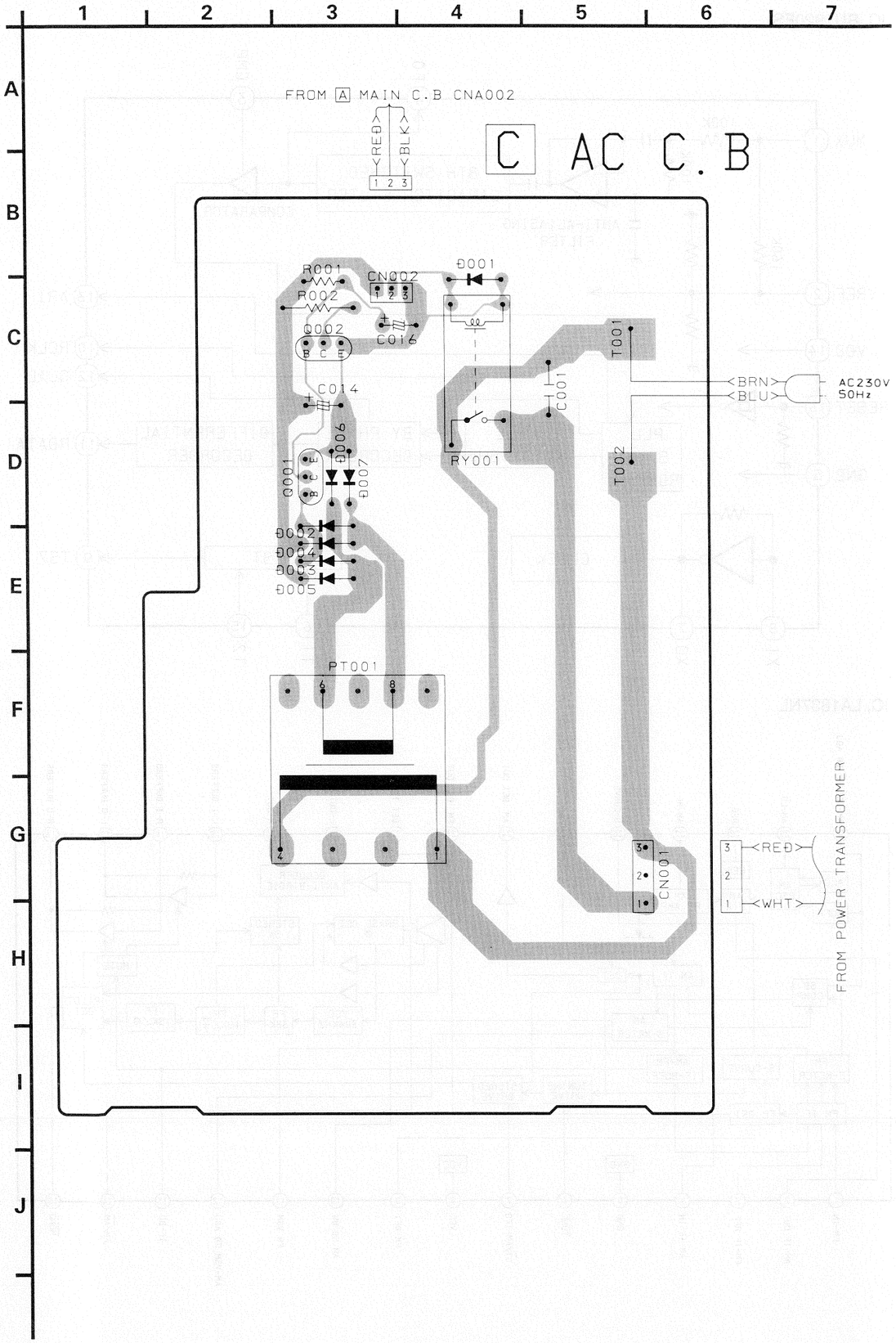
IC, BU1920FS



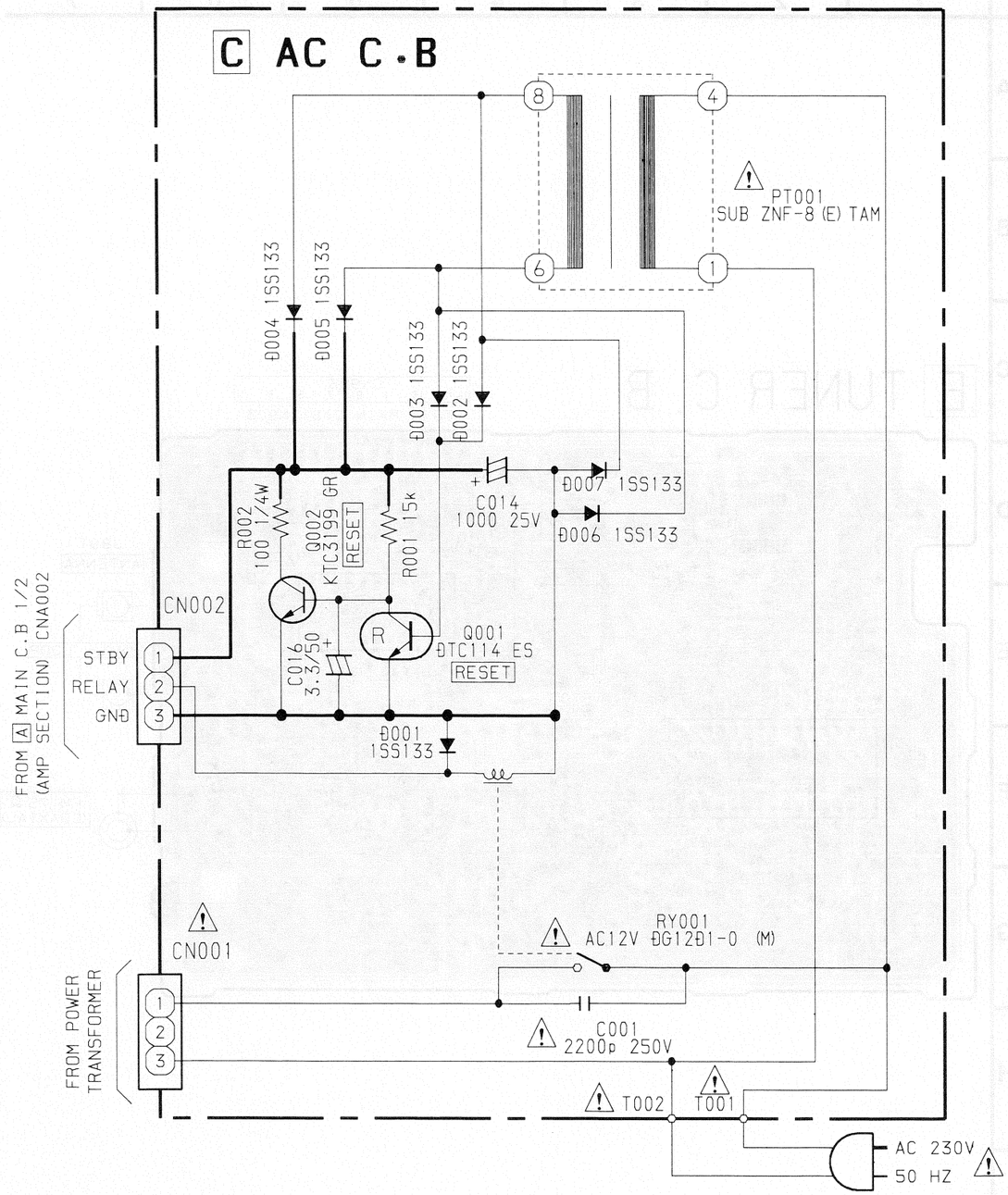
IC, LA1837NL



WIRING – 4 (AC)



SCHEMATIC DIAGRAM – 5 (AC)



IC DESCRIPTION

IC, LC876580W-5N98

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{I-STEREO (TU)}}$	I	Tuner stereo detection.
2	I-TUDO (TU)	I	Connect to tuner PLL IC, LC72131D Pin6 (DO).
3	I-RDS DATA (TU)	I	RDS data input.
4	O-ARDY (MD)	O	Serial data for MD unit control reception / transmission ready output.
5	O-STB (M)	O	Main shift register: latch output (Not used).
6	O-CLK	O	Front shift register BU4094BCF (reversal) and tuner PLL IC, LC72131D combination clock output.
7	O-DATA	O	Front shift register BU4094BCF (reversal) and tuner PLL IC, LC72131D combination data output.
8	O-VOLCTL	O	Connect to Function VOL IC, M62495FP pin13 (CONT).
9	I-TMBASE	I	Reference clock input. Connect to LC72131D Pin 7 (T-BASE).
10	$\overline{\text{O-CLK SHIFT}}$	O	Clock shift control output.
11	$\overline{\text{I-RESET}}$	I	MICON reset.
12	I-ACOFF	I	Hold status detection.
13	I-TU SIG / I-MS (TU / TP)	I	AD for RDS signal level input / Tape music sensor input (Not used).
14	VSS 1	-	GND.
15	CF 1	-	Connect to 9.43MHz crystal oscillation.
16	CF 2	-	Connect to 9.43MHz crystal oscillation.
17	VDD 1	-	MICON power supply (+5V).
18	I-LEVEL	I	Level meter input (AD).
19	I-KEY1	I	Key 1: AD input.
20	I-KEY0	I	Key 0: AD input.
21	I-MODE SW (TP)	I	Deck mechanical status detection input (AD).
22	O-STB (F)	O	Front shift register BU4094BCF's latch reversal output.
23	I-JOG1	I	AD input from multi jog rotary encoder output A/B.
24	O-BBEB	O	BBE control reversal output (B).
25	O-CE (TU)	O	Tuner PLL IC, LC72131D chip enable output.
26	O-BBEA	O	BBE control reversal output (A).
27	I-RDS CLK (TU)	I	RDS clock input.
28	O-LMUTE	O	Line mute output.
29	I-REM	I	Remote controller input.
30	NC	-	Not connected.
31	NC	-	Not connected.
32	NC	-	Not connected.
33	NC	-	Not connected.
34	NC	-	Not connected.
35	NC	-	Not connected.
36	NC	-	Not connected.
37	NC	-	Not connected.

Pin No.	Pin Name	I/O	Description
38	NC	-	Not connected.
39	NC	-	Not connected.
40	NC	-	Not connected.
41	NC	-	Not connected.
42	NC	-	Not connected.
43	NC	-	Not connected.
44	NC	-	Not connected.
45	NC	-	Not connected.
46	VDD3	-	MICON power supply (+5V).
47	I-CLS (MD)	I	MD unit close detection SW input / Close at L.
48	NC	-	Not connected.
49	NC	-	Not connected.
50	NC	-	Not connected.
51	VP	-	GND.
52	NC	-	Not connected.
53	NC	-	Not connected.
54	NC	-	Not connected.
55	NC	-	Not connected.
56	NC	-	Not connected.
57	NC	-	Not connected.
58	$\overline{\text{I-SWCLS (TP)}}$	I	Connect to GND through a resistor.
59	$\overline{\text{I-SWOPN (TP)}}$	I	Connect to GND through a resistor.
60	I-AUTO (TP)	I	Deck mechanical status detection input (AUTO). Connect to GND through a resistor.
61	I-CAM (TP)	I	Deck mechanical status detection input (CAM). Connect to GND through a resistor.
62	$\overline{\text{MD}}$ / TAPE	I	Initial matrix input (L: MD / H: TAPE). Connect to GND through a resistor.
63	RDS	I	Initial matrix input (H: RDS). Connect to VDD3 through a resistor.
64	$\overline{\text{BBE}}$	I	Initial matrix input (L: BBE). Connect to GND through a resistor.
65	$\overline{\text{DOLBY}}$	I	Initial matrix input (L: DOLBY). Connect to VDD3 through a resistor.
66	AM10K	I	Initial matrix input (H: 10K STEP / L: 9K STEP). Connect to GND through a resistor.
67	FM WIDE&AMST	I	Initial matrix input (H: FM WIDE & AM STEREO). Connect to GND through a resistor.
68	LW	I	Initial matrix input (H: LW). Connect to VDD3 through a resistor.
69	SW	I	Initial matrix input (H: SW). Connect to GND through a resistor.
70	OIRT	I	Initial matrix input (H: OIRT). Connect to GND through a resistor.
71	I-CDSRQ (CD)	I	CD data transmission request signal input.
72	VDD4	-	MICON power supply (+5V).
73	O-CDON (CD)	O	CD power supply control output.
74	O-D MS CD (CD)	O	Transmission output to CD MICON.
75	O-CS CD (CD)	O	Data transmission request output to CD MICON.
76	O-SCK (CD)	O	Data reception and transmission clock output to CD MICON.

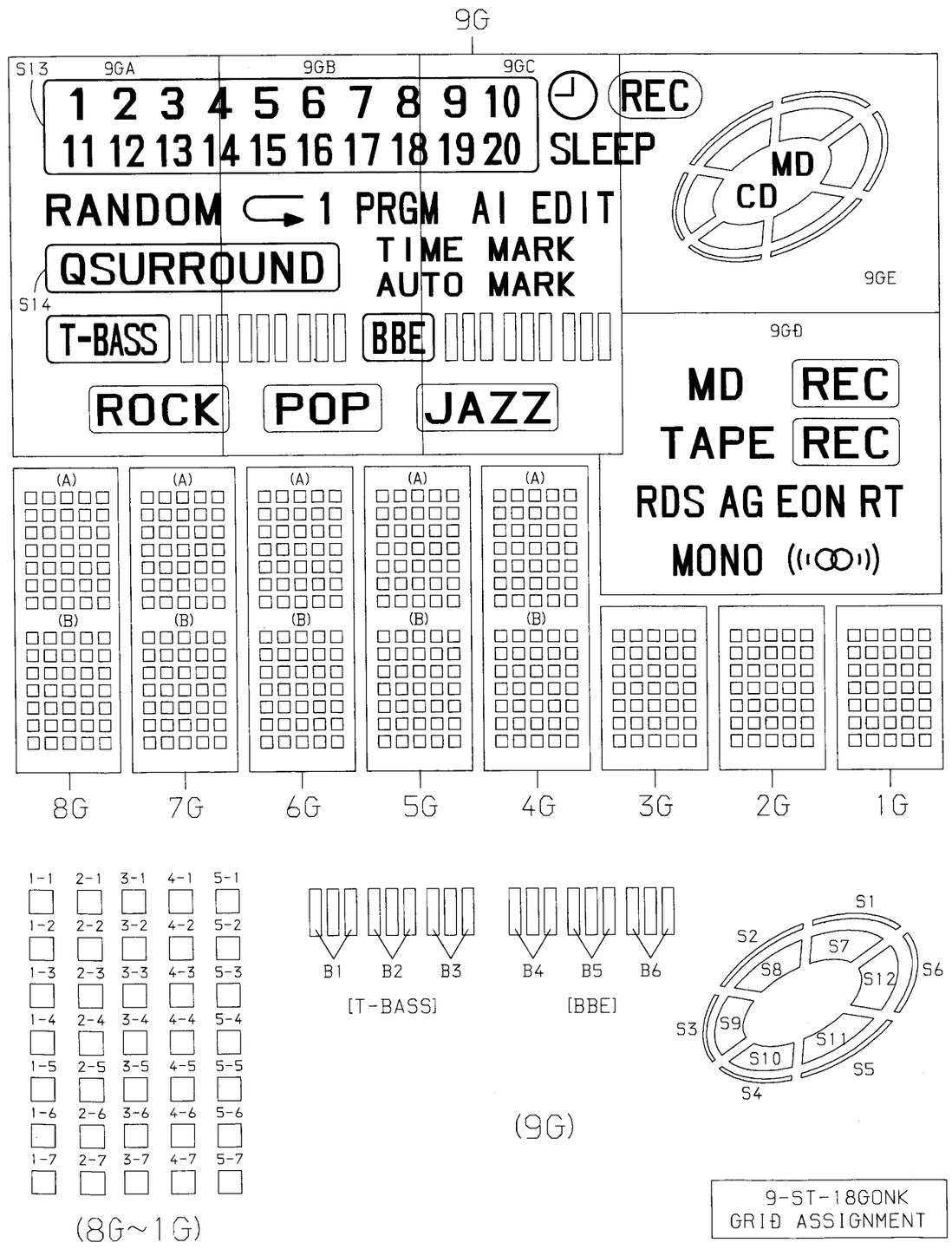
Pin No.	Pin Name	I/O	Description
77	O-SLP (CD)	O	Sleep output to CD MICON.
78	$\overline{\text{O-RST (CD)}}$	O	Reset output to CD MICON.
79	I-SWCD	I	CD disc detection switch / H active.
80	I-D CD MS (CD)	I	Transmission data from CD MICON.
81	O-QSURR	O	Q-surround IC control output.
82	O-TUON (TU)	O	Tuner power supply switch output.
83	O-MOTOR (TP)	O	Deck mechanical motor control output (Not used).
84	O-SWSCAN	O	Tuner test mode TP (Used for coil adjustment point).
85	O-SREQ (MD)	O	Serial data for MD unit control transmission request.
86	O-MD REC	O	Output H at MD REC.
87	O-P.ON	O	Power on output.
88	$\overline{\text{O-RST (MD)}}$	O	MD unit reset signal output.
89	VSS2	-	GND.
90	VDD2	-	MICON power supply (+5V).
91	O-OE (FL)	O	Output function output to FL driver.
92	O-LAT (FL)	O	Latch output to FL driver.
93	O-MUTE	O	Main mute output.
94	$\overline{\text{O-PL (TP)}}$	O	Deck mechanical plunger control output (Not used).
95	O-SI (FL)	O	Serial data output to FL driver.
96	O-MrEQ (MD)	O	Serial data for MD unit control transmission request.
97	O-CLK (FL)	O	Clock output to FL driver.
98	O-SIN (MD)	O	Serial data for MD unit control output.
99	I-SOUL (MD)	I	Serial data for MD unit control input.
100	I-ACLK (MD)	I	Serial data for MD unit control input.

IC, LC72131D

Pin No.	Pin Name	I/O	Description
1	XIN	I/O	A crystal oscillator (4.5MHz) is connected between these pins.
22	XOUT		
2	NC	–	Not connected.
3	CE	I	To enable the IC. Active "H".
4	DI	I	Digital data input from CPU when relevant key is operated. Active "H".
5	CL	I	To clock in the data DI.
6	DO	O	Digital data output to CPU.
7	T-BASE	O	Outputs a reference clock signal (8Hz) for the clock.
8	$\overline{\text{MONO}}$ / BEAT	O	Outputs "H" when BEAT is switched.
9	$\overline{\text{FM}}$ / $\overline{\text{SW}}$	O	Outputs "L" or "H" as follows: 2 BAND: AM H, FM L 3 BAND: LW H, MW H, FM L 3 BAND: MW H, SW L, FM L
10	$\overline{\text{MW}}$/SW	O	Outputs "L" or "H" as follows: 2 BAND: AM L, FM L 3 BAND: LW H, MW L, FM L 3 BAND: MW L, SW H, FM L
11	IF-MUTE	O	To control internal counter.
12	IF-IN	I	General purpose counter input.
13	$\overline{\text{TUNE}}$	I	Receives "L" when station is tuned.
14	NC	–	Not connected.
15	AM IN	I	Receives the AM local oscillator frequency signal.
16	FM IN	I	Receives the FM local oscillator frequency signal.
17	VDD	–	Supply power to IC (+5V).
18	PD	O	PLL charge pump output.
19	AIN	I	The MOS transistor for PLL active low pass filter.
20	AOUT	O	
21	VSS	–	Ground.

FL (9–ST–18GONK) GRID ASSIGNMENT & ANODE CONNECTION

GRID ASSIGNMENT



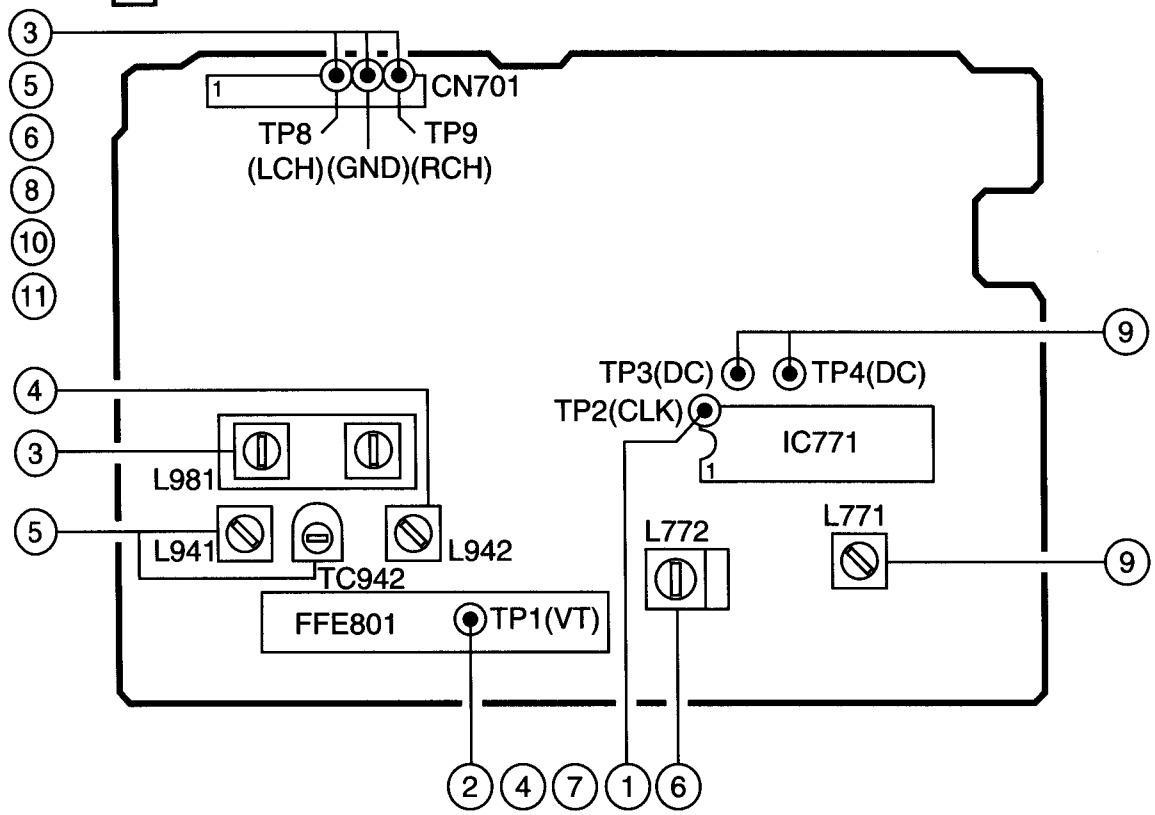
9-ST-18GONK
GRIÐ ASSIGNMENT

ANODE CONNECTION

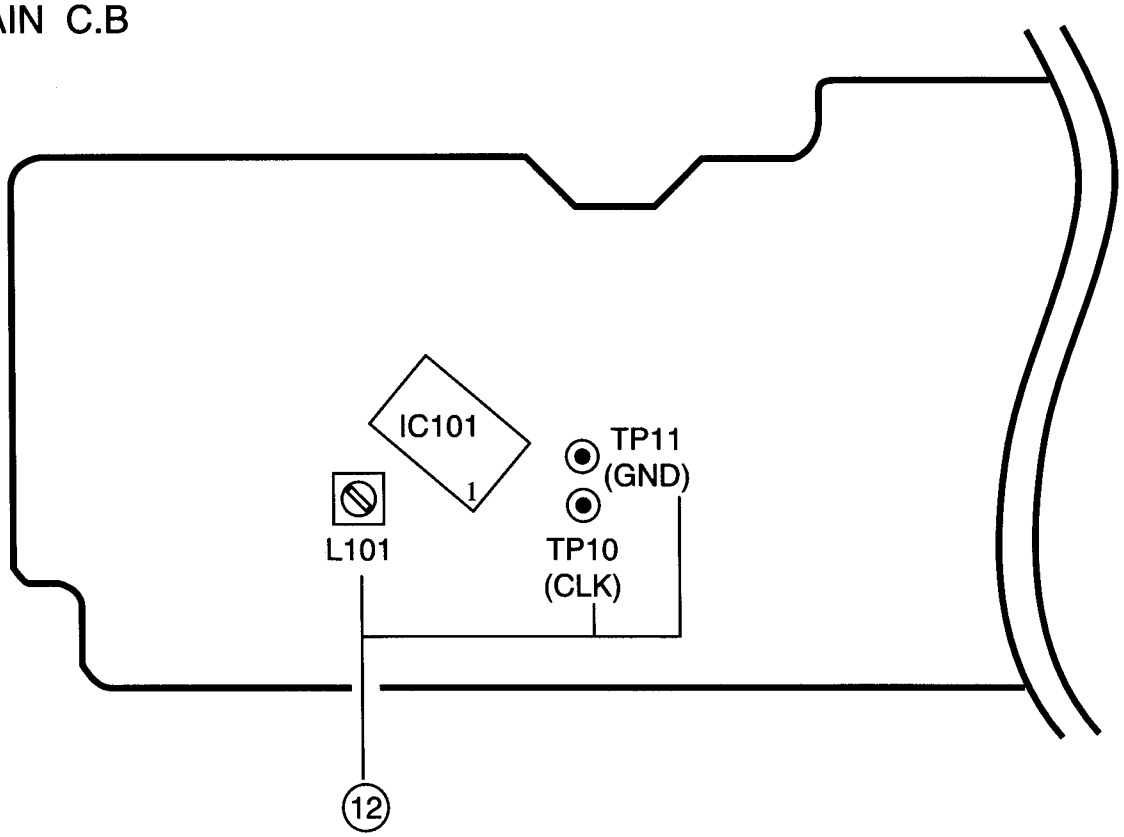
	1G	2G	3G	4G	5G	6G	7G	8G	9G (A~E)
P1	–	–	–	1-1A	1-1A	1-1A	1-1A	1-1A	ROCK
P2	–	–	–	2-1A	2-1A	2-1A	2-1A	2-1A	POP
P3	–	–	–	3-1A	3-1A	3-1A	3-1A	3-1A	JAZZ
P4	–	–	–	4-1A	4-1A	4-1A	4-1A	4-1A	1
P5	–	–	–	5-1A	5-1A	5-1A	5-1A	5-1A	11
P6	–	–	–	1-2A	1-2A	1-2A	1-2A	1-2A	2
P7	–	–	–	2-2A	2-2A	2-2A	2-2A	2-2A	12
P8	–	–	–	3-2A	3-2A	3-2A	3-2A	3-2A	3
P9	–	–	–	4-2A	4-2A	4-2A	4-2A	4-2A	13
P10	–	–	–	5-2A	5-2A	5-2A	5-2A	5-2A	4
P11	–	–	–	1-3A	1-3A	1-3A	1-3A	1-3A	14
P12	–	–	–	2-3A	2-3A	2-3A	2-3A	2-3A	5
P13	–	–	–	3-3A	3-3A	3-3A	3-3A	3-3A	15
P14	–	–	–	4-3A	4-3A	4-3A	4-3A	4-3A	S13
P15	–	–	–	5-3A	5-3A	5-3A	5-3A	5-3A	6
P16	–	–	–	1-4A	1-4A	1-4A	1-4A	1-4A	16
P17	–	–	–	2-4A	2-4A	2-4A	2-4A	2-4A	7
P18	–	–	–	3-4A	3-4A	3-4A	3-4A	3-4A	17
P19	–	–	–	4-4A	4-4A	4-4A	4-4A	4-4A	8
P20	–	–	–	5-4A	5-4A	5-4A	5-4A	5-4A	18
P21	–	–	–	1-5A	1-5A	1-5A	1-5A	1-5A	9
P22	–	–	–	2-5A	2-5A	2-5A	2-5A	2-5A	19
P23	–	–	–	3-5A	3-5A	3-5A	3-5A	3-5A	10
P24	–	–	–	4-5A	4-5A	4-5A	4-5A	4-5A	20
P25	–	–	–	5-5A	5-5A	5-5A	5-5A	5-5A	RANDOM
P26	–	–	–	1-6A	1-6A	1-6A	1-6A	1-6A	↻
P27	–	–	–	2-6A	2-6A	2-6A	2-6A	2-6A	1
P28	–	–	–	3-6A	3-6A	3-6A	3-6A	3-6A	PRGM
P29	–	–	–	4-6A	4-6A	4-6A	4-6A	4-6A	T-BASS
P30	–	–	–	5-6A	5-6A	5-6A	5-6A	5-6A	B1
P31	–	–	–	1-7A	1-7A	1-7A	1-7A	1-7A	B2
P32	–	–	–	2-7A	2-7A	2-7A	2-7A	2-7A	B3
P33	–	–	–	3-7A	3-7A	3-7A	3-7A	3-7A	BBE
P34	–	–	–	4-7A	4-7A	4-7A	4-7A	4-7A	B4
P35	–	–	–	5-7A	5-7A	5-7A	5-7A	5-7A	B5

	1G	2G	3G	4G	5G	6G	7G	8G	9G (A~E)
P36	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	B6
P37	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	S14
P38	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	**QSURROUND**
P39	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	**AI**
P40	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	**EDIT**
P41	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	**TIME MARK**
P42	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	**AUTO MARK**
P43	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	**MONO**
P44	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	((ꝏ))
P45	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	**RDS**
P46	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	**AG**
P47	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	**EON**
P48	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	**RT**
P49	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	◴
P50	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	**SLEEP**
P51	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	(REC)
P52	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	**TAPE** [REC]
P53	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	**MD** [REC]
P54	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	S1
P55	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	S7
P56	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	S2
P57	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	S8
P58	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	S3
P59	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	S9
P60	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	S4
P61	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	S10
P62	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	S5
P63	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	S11
P64	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	S6
P65	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	S12
P66	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	**CD**
P67	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	**MD**
P68	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	-
P69	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	-
P70	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	-

E TUNER C.B



A MAIN C.B



< TUNER SECTION >

1. Clock Frequency Check
   Settings : • Test point : TP2 (CLK)
   Method : Set to MW 1602kHz and check that the test point is 2052kHz ± 45Hz.

2. MW VT Check
   Settings : • Test point : TP1 (VT)
   Method : Set to MW 1602kHz and check that the test point is less than 8.0V. Then set to MW 531kHz and check that the test point is more than 0.6V.

3. MW Tracking Adjustment
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location : L981 (1/3)
   Method : Set to MW 999kHz and adjust L981 (1/3) so that the test point becomes maximum.

4. LW VT Adjustment
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L942
   Method : Set to LW 144kHz and adjust L942 so that the test point becomes 1.3V ± 0.05V.
   Then set to LW 290kHz and check that the test point is less than 8.0V.

5. LW Tracking Adjustment
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location :
   L941 ..... 144kHz
   TC942 ..... 290kHz
   Method : Set up TC942 to center before adjustment. The level at 144kHz is adjusted to MAX by L941. Then the level at 290kHz is adjusted to MAX by TC942.

6. AM IF Adjustment
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location :
   L772 ..... 450kHz

7. FM VT Check
   Settings : • Test point : TP1 (VT)
   Method : Set to FM 108.0MHz and check that the test point is less than 8.0V. Then set to FM 87.5MHz and check that the test point is more than 0.5V.

8. FM Tracking Check
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   Method : Set to FM 98.0MHz and check that the test point is less than 13dBμV.

9. DC Balance / Mono Distortion Adjustment
   Settings : • Test point : TP3,TP4 (DC balance)
   • Adjustment location : L771
   • Input level : 60dBμV
   Method : Set to FM 98.0MHz and adjust L771 so that the voltage between TP3 and TP4 becomes 0V ± 0.04V.
   Next, check that the distortion is less than 1.3%.

10. Output Level Check
    <MW>
    Settings : • Test point : TP8 (Lch), TP9 (Rch)
    • Input level : 74dBμV
    Method : Set to MW 999kHz and check that the test point is 130mV ± 3dB.

    <FM>
    Settings : • Test point : TP8 (Lch), TP9 (Rch)
    • Input level : 60dBμV
    Method : Set to FM 98.0MHz and check that the test point is 520mV ± 3dB.

11. FM Separation Check
    Settings : • Test point : TP8 (Lch), TP9 (Rch)
    • Input level : 60dBμV
    Method : Set to FM 98.0MHz and check that the test point is more than 12dB.

< MAIN SECTION >

12. μ-CON OSC Adjustment
    Settings : • Test point : TP10 (CLK), TP11 (GND)
    • Adjustment location : L101
    Method : Insert AC plug while pressing TUNER function key. Adjust L101 so that the frequency at the test point is 97.258Hz ± 0.098Hz.

CD TEST MODE

1. How to activate CD Test Mode
   Insert the AC plug while pressing the "Enter" button. FL display is fully illuminated and test mode will be activated. Insert the test disc and operate the test mode following the control method as shown below.
   Note: If no CD was inserted, it displays "No Disc" and cannot be operated.

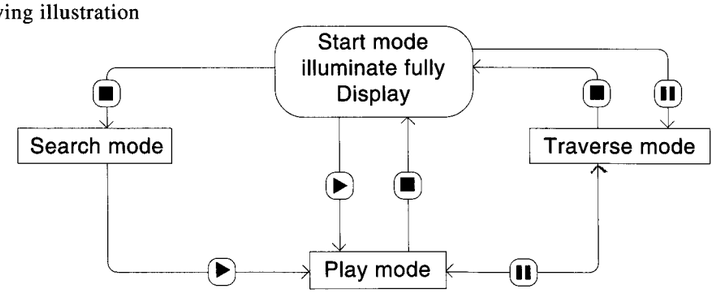
2. How to cancel CD Test Mode
   Either one of the following operations will cancel the CD test mode.
   • Disconnect the AC plug.
   • Press "Function" button.
   • Press "Power" button.
   • Press "Band" button.

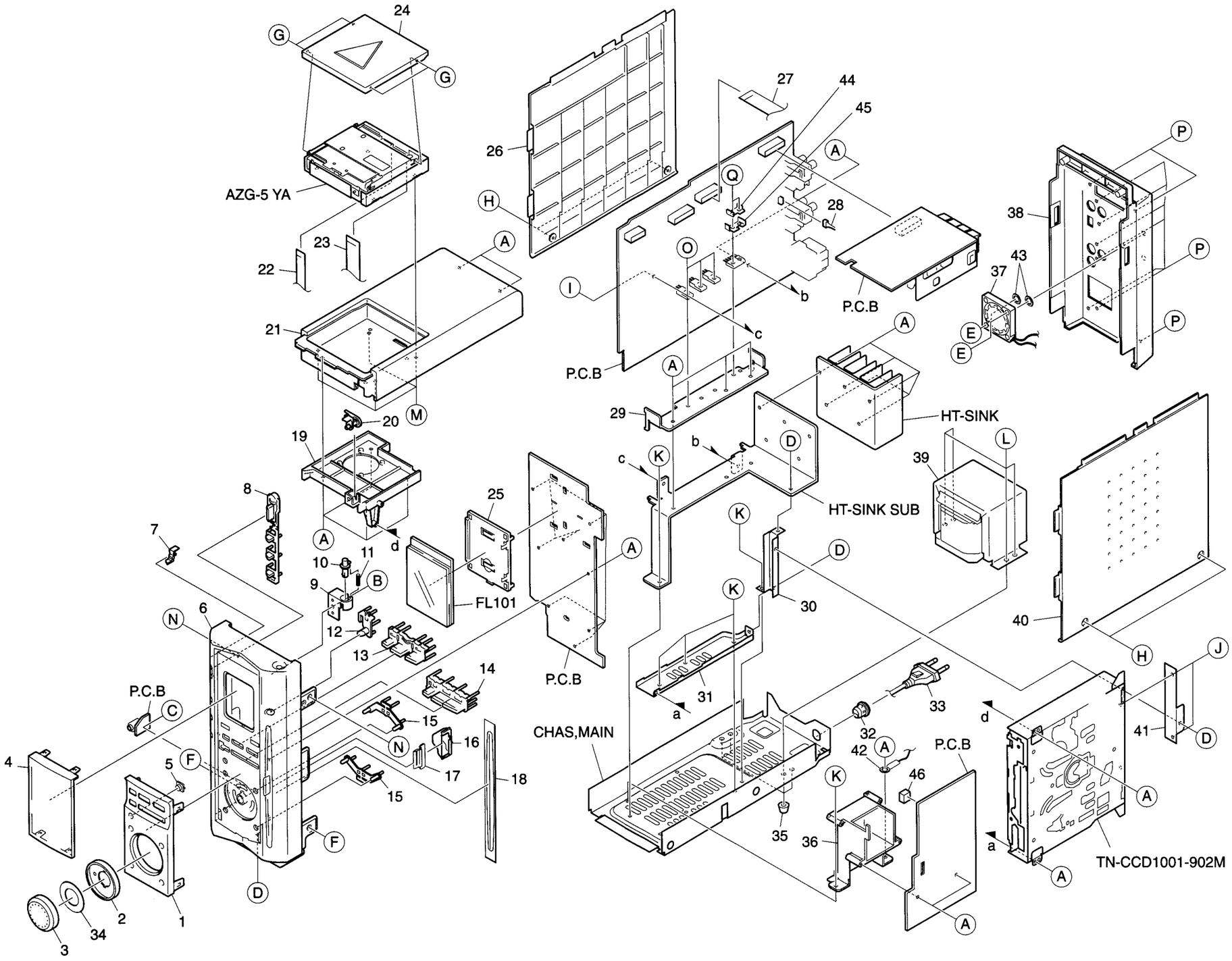
3. CD Test Mode functions
   When test mode is activated, the following mode functions can be used by pressing the operation keys.

Mode	Function Button	FL Display	Operation	Content
Start Mode		Fully illuminate	• Initialization	
Sled Mode	⏮ ⏭	CD TEST	• Shift to the external circumference of Pick-Up. * Note 1 • Shift to the internal circumference of Pick-Up. (Normal operation during CD PLAY)	• SLED SERVO • SLED Operation Check
Search Mode	■	CD	• LASER DIODE illuminated all the time (CD block power ON) • Continuous Focus Search *Note 2 (Pickup lense repeat full swing)	• APC circuit check • Laser current measurement • Focus search waveform check • Focus error waveform check (In Search Mode, FOK/FZC is not checked)
Play Mode	▶	1Tr.0:01	• Normal Playback • When TOC READ is unavailable Continue focus search *Note 2 • Continue spindle motor kick spin	• FOCUS SERVO/TRACKING SERVO • CLV SERVO/SLED SERVO • FOK check • RF waveform check
Traverse Mode	⏸	1Tr.0:01	• Tracking servo OFF/ON • Repeat OFF/ON every time [⏸] button is pressed	• TRACKING SERVO OFF • Tracking Balance Check

* Note 1 : When pressing the ⏮ or ⏭ keys, take care to avoid damage to the gears. Because the sled motor is activated when the ⏮ or ⏭ keys are pressed, even when the pick-up is at outermost or innermost track. The sled operation is not as normal and moves outermost track with ⏮ button and innermost track with ⏭ button
* Note 2 : There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these case, the power supply should be switched off for an hour until heat has been reduced and then re-start.

4. The Operation Outline
   This operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration




24
G
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AZG-5 YA
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P.C.B
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25
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P.C.B
FL101
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HT-SINK SUB
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CHAS,MAIN
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36
A
42
46
K
P.C.B
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L
HT-SINK
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TN-CCD1001-902M
A

MECHANICAL PARTS LIST 1 / 1

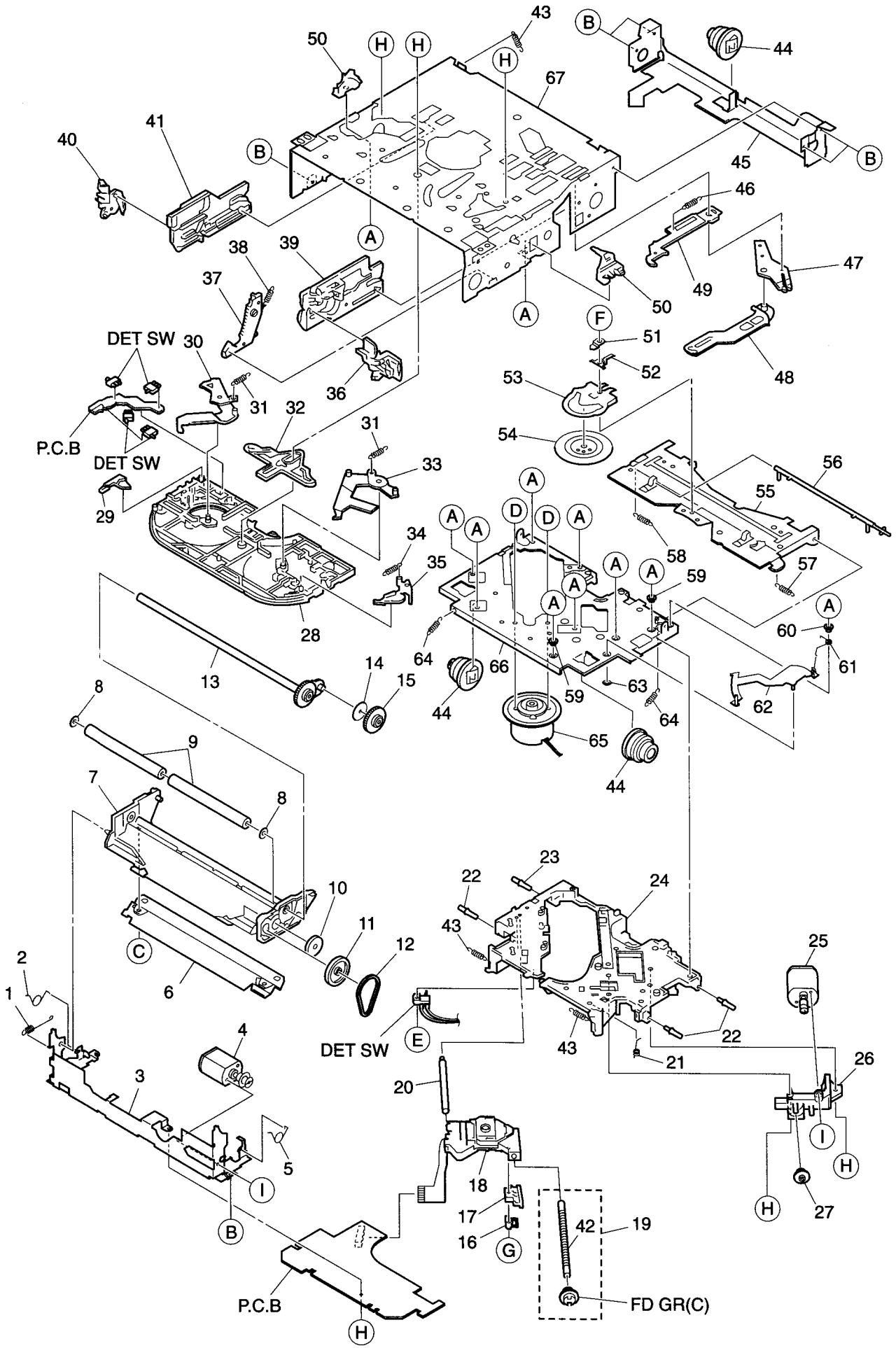
If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CJ5-008-010		PANEL,FR CD
2	8A-CJ5-017-010		REFLECTOR,JOG
3	8A-CJ5-016-010		KNOB,RTRY JOG
4	8A-CJ5-033-010		WINDOW,DISPLAY EZ
5	8A-CJ5-019-010		LENS,SENSOR
6	8A-CJ5-024-010		CABI,FR EZ
7	8A-CJ5-015-010		REFLECTOR,POWER
8	8A-CJ5-009-010		KEY,POWER
9	8A-CJ5-203-010		HLDR,BTN
10	8A-CJ5-014-010		BTN,OPEN
11	8A-CJ5-208-010		SPR-C,OPEN
12	8A-CJ5-013-010		KEY,EJECT CD
13	8A-CJ5-011-010		KEY,PLAY
14	8A-CJ5-010-010		KEY,SKIP
15	8A-CJ5-012-010		KEY,ENTER
16	8A-CJ5-215-010		GUIDE,LED CD
17	8A-CJ5-018-010		REFLECTOR,CD
18	8A-CJ5-023-010		DUST COVER, CD FELT
19	8A-CJ5-202-010		HLDR,TOP
20	8A-CJ5-207-010		LEVER,OPEN
21	8A-CJ5-002-010		CABI,TOP
22	8A-CJ5-632-010		CABLE,FFC9P-1.0-20
23	8A-CJ5-633-010		CABLE,FFC14P-1.0-10
24	8A-CJ5-006-010		LID,MD
25	8A-CJ5-209-010		GUIDE,FL
26	8A-CJ5-004-010		PANEL,SIDE L
27	8A-CJ5-630-010		CABLE,FFC15P-1.0-20
28	8A-CJ5-634-010		CONN ASSY,2P SHLD
29	8A-CJ5-214-010		HLDR,TR
30	8A-CJ5-206-010		HLDR,CD B
31	8A-CJ5-205-010		HLDR,CD A
32	87-085-185-010		BUSHING, AC CORD (E)
⚠ 33	87-A80-092-010		AC CORD ASSY,E BLK SUN FAI
34	8A-CJ5-217-010		PLATE,JOG
35	8Z-NB8-240-010		COVER, PL
36	8A-CJ5-204-010		HLDR,ECO
37	8Z-CL1-663-010		FAN,MF40D-12-200MM
38	8A-CJ5-026-010		CABI,REAR EZ
⚠ 39	8A-CJ5-622-010		PT,ACJ-5 EZ
40	8A-CJ5-005-010		PANEL,SIDE R
41	8A-CJ5-213-010		HLDR,MECHA CD
42	87-064-185-010		HLDR,WIRE
43	87-ZG9-207-010		SH,S-SCREW
44	8A-CJ5-221-010		HT-SINK,IC A
45	8A-CJ5-222-010		HT-SINK,IC B
46	8A-CJ5-228-010		CUSH-R,13-13-10
A	87-067-579-010		TAPPING SCREW, BVT2+3-8
B	87-B10-294-010		BVT2+2.6-8
C	88-AR1-217-010		S-SCREW,BFT2+3-8
D	87-067-688-010		BVTT+3-6
E	87-751-096-410		VT2+3-10 GLD
F	87-591-094-010		QIT+3-6 GOLD
G	87-078-153-010		SCRW,1.4-2.5 CR
H	87-067-641-010		UTT2+3-8(W/O SLOT)BL
I	87-NF4-224-010		S-SCREW,IT3B+3-8 CU
J	87-067-421-010		VTT+2-4
K	87-067-584-010		BVT2+3-6 W/O SLOT
L	87-078-191-010		S-SCREW,IT+4-10
M	87-067-684-010		BVT2+2.6-6 W/O SLOT
N	87-721-096-410		QT2+3-10 GLD
O	87-067-703-010		TAPPING SCREW, BVT2+3-10
P	87-067-660-010		TAPPING SCREW, BVT2+3-8
Q	87-067-581-010		BVT2+3-15 W/O SLOT

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow				

CD MECHNISM EXPLODED VIEW 1 / 1

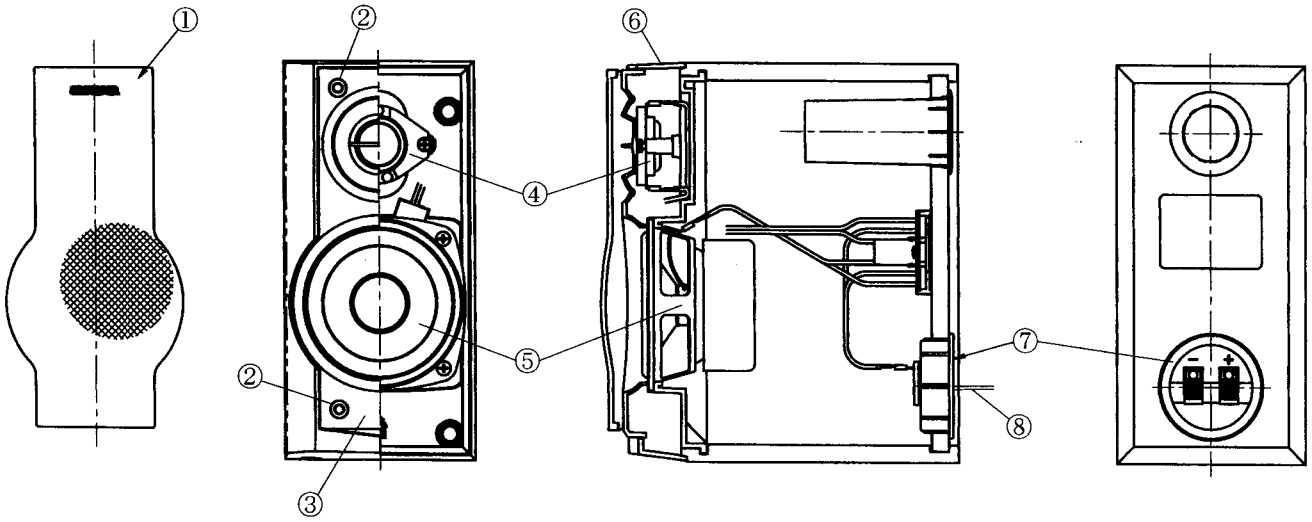


CD MECHANISM PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	S3-031-110-030		EARTH SPR
2	S3-031-110-180		L.P SPRING(L)
3	S3-031-110-010		FRONT BRKT
4	S3-031-113-010		LDG MOTOR ASSY
5	S3-031-110-190		L.P SPRING(R)
6	S3-031-110-050		SUPPORT PL
7	S3-031-110-080		GR MT BLK
8	S9-W03-302-760		NW BLUE 2.9-5-0.3
9	S3-031-110-360		LDG ROLLER(P)
10	S3-031-110-100		LDG GR(3)
11	S3-031-110-090		LDG GR(2)
12	S3-031-110-290		LDG BELT
13	S3-031-113-020		LDG RLR SFT ASSY
14	S9-W07-250-300		LUMIL AR W 2.3-9.8-0.25
15	S3-031-110-120		LDG GR(5)
16	S3-031-050-300		NUT PUSH SPR PL(M)
17	S3-031-050-290		PU M NUI(M)
18	S6-904-160-010		PICK-UP VED0375-TN
19	S3-031-053-040		FEED SCREW(M)ASSY
20	S3-031-050-320		PU SHAFT(M)
21	S3-031-050-330		THRUST SPR(M)
22	S3-031-050-210		LOCK PIN
23	S3-031-050-220		LOCK PIN BL
24	S3-031-050-760		F.M. BASE(A)
25	S3-031-053-010		FEED MOTOR ASSY
26	S3-031-050-280		FD GR BLK(M)
27	S3-030-050-100		PU GEAR(B)
28	S3-031-010-570		UPPER PL(A)
29	S3-031-110-240		SW ACTR
30	S3-031-010-090		SEL ARM (L)
31	S3-031-010-110		S ARM SPRING
32	S3-031-010-080		SEL STOP PL
33	S3-031-010-100		SEL ARM (R)
34	S3-031-010-250		S.L ARM SPRING
35	S3-031-010-240		S.L ARM
36	S3-031-010-580		FIX ARM(R)A
37	S3-031-010-380		LDG GR(6)B
38	S3-031-010-220		LDG GR(6)SPRING
39	S3-031-010-370		FIX PL(R)B
40	S3-031-010-340		FIX ARM(L)B
41	S3-031-010-500		FIX PL(L)Z
42	S3-031-050-310		FD SCREW(M)
43	S3-031-010-520		HUNG UP SPRING(A)
44	S3-031-050-240		DAMPER(J)
45	S3-031-010-020		REAR D BRKT
46	S3-031-010-150		TRIG PL SPRING
47	S3-031-010-160		TRIG ARM
48	S3-031-010-120		TRIG LVR
49	S3-031-010-140		TRIG PL
50	S3-031-010-030		DAMPER PIN
51	S3-031-050-360		STOPPER SPR
52	S3-031-050-190		8CM STOPPER SPR PL
53	S3-031-050-230		CLAMPER PLATE
54	S3-031-050-150		CLAMPER
55	S3-031-050-740		CLP ARM(A)
56	S3-031-050-410		8CM STOPPER(M)
57	S3-031-050-140		CLP ARM SPRING
58	S3-031-050-250		CLP ARM SPR(L)
59	S3-031-050-700		D.S ARM COLLAR
60	S3-031-050-720		SP COLLAR
61	S3-031-050-710		D.S ARM SPR
62	S3-031-055-010		DISC SUPPORT ARM ASSY
63	S9-W02-500-900		PW CUT 2.1-4-0.5
64	S3-031-010-530		HUNG DOWN SPRING(A)
65	S3-031-053-050		SPINDLE MOTOR(M)ASSY
66	S3-031-050-730		T.T.BASE(A)
67	S3-031-010-010		FRAME
A	87-841-034-410		CAMERA B TAPPING SCREW M2-5
B	87-741-033-410		CAMERA SCREW TS.G M2-4
C	S9-C04-205-030		CAMERA S TAPPING SCREW M2-5
D	87-267-525-310		CAMERA SCREW M1.7-2.2
E	87-263-036-010		CAMERA TAPPING SCREW B 3 M2-8
F	S9-C42-202-010		CAMERA TAPPING SCREW S 3 M2-2
G	S9-C45-175-030		CAMERA TAPPING SCREW P3 M1.7-5
H	87-351-549-310		CAMERA TAPPING SCREW B 3 M2-4
I	S9-P02-200-310		TAMS SCREW M2-3

SPEAKER PARTS LAYOUT 1 / 1



SPEAKER PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CJ5-422-010		GRILLE,FRAME ASSY Y
2	8A-CJ5-409-010		FASTENER,
3	8A-CJ5-405-010		PANEL,SP
4	8A-CJ5-417-010		SPKR, TW 25
5	8A-CJ5-411-010		SPKR, W 87S
6	8A-CJ5-403-010		PANEL,FR
7	8A-CJ5-415-010		TERMINAL,
8	8Z-CL5-543-010		CORD,SP

ACCESSORIES / PACKAGE LIST

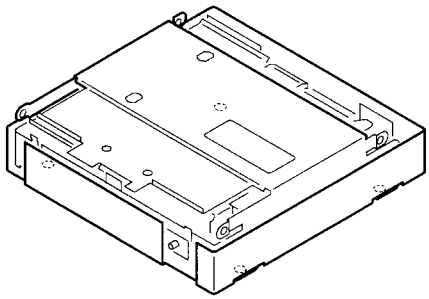
If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CJ5-906-010		IB,EZ(9L)M
2	8A-CJ5-955-010		RC UNIT,RC-AAT10
3	87-006-225-010		ANT,LOOP ANT NC2
4	87-A90-118-010		ANT,WIRE FM(Z)

aiwa SERVICE

AZG-5

English



SERVICE MANUAL

MD MECHANISM

BASIC MD MECHANISM : KMS-280A

TYPE
A
YA

aiwa

S/M Code No. 09-99C-338-1N2

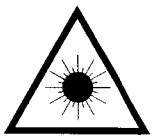
DATA

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel:Usynling laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

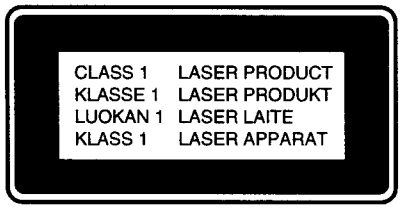
ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

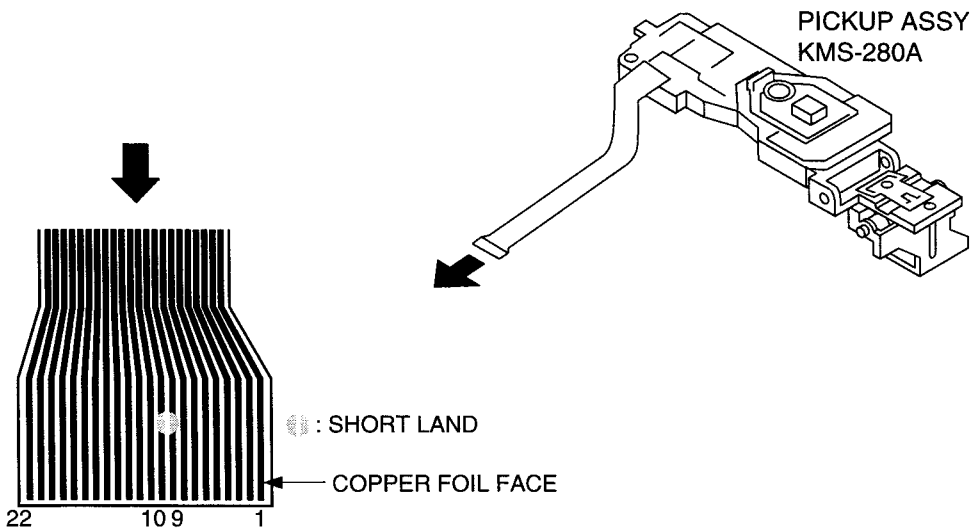
This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



Precaution to replace Optical block (KMS-280A)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the figure below.



ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

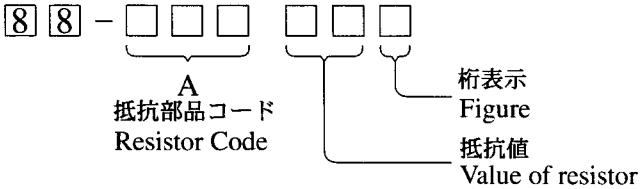
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-707-010		C-IC,CXA2523AR
	87-A20-710-040		C-IC,S-8110AMP
	87-A20-708-010		C-IC,CXD2652AR
	87-A21-140-010		C-IC,MSM51V17400D
	87-A21-027-040		C-IC,TC7W66FU
	8A-ZG5-602-010		C-IC,CXP81952M-555R
	87-A21-030-040		C-IC,S-93C46AMFN
	87-A21-024-010		C-IC,BD6601KV
	87-A21-199-040		C-IC,LB1638M
	87-A20-719-040		C-IC,MPC18A20VM
	87-A20-602-040		C-IC,M5291FP
	87-A21-035-040		C-IC,R1110N281B-TR
	87-A21-110-040		C-IC,AK4519VF
	87-A21-036-040		C-IC,R1110N251B-TR
	87-017-853-040		IC,NJM2100V
TRANSISTOR			
	89-115-884-080		CHIP -TRANSISTER 2SA1588Y
	87-A30-148-080		C-TR,2SC4738GR
	87-026-644-080		C-TR,DTA144EE
	87-A30-147-080		C-TR,2SA1832GR
	87-A30-033-080		C-FET,2SK2035
	87-A30-181-080		C-TR,DTA114TEA
	87-A30-150-080		C-FET,MTDF2N06HD
	87-026-645-080		C-TR,DTC144EE
	89-113-695-680		C-TR,2SA1369G/H
	87-A30-020-080		C-TR,DTC114EE
DIODE			
	87-A40-412-040		C-DIODE,SB05-05CP
	87-A40-124-080		C-DIODE,RB501V-40
	87-017-520-080		C-DIODE,SFPB52
	87-001-166-080		DIODE,1SS301
MD C.B			
C100	87-016-296-080		C-CAP,TN 22-4SV(A)
C102	87-016-296-080		C-CAP,TN 22-4SV(A)
C103	87-016-296-080		C-CAP,TN 22-4SV(A)
C104	87-A11-046-080		C-CAP,TN 100U-4 M F95 B
C106	87-016-296-080		C-CAP,TN 22-4SV(A)
C107	87-A10-504-080		C-CAP,U 0.047-16 K B
C108	87-012-286-080		CAP, U 0.01-25
C109	87-010-787-080		CAP, U 0.022-25
C110	87-A10-353-080		C-CAP,U0.22-10KB
C111	87-012-282-080		CAP, U 4700P-50
C112	87-A11-049-080		C-CAP,U 1-6.3 K B
C113	87-012-282-080		CAP, U 4700P-50
C114	87-A11-049-080		C-CAP,U 1-6.3 K B
C115	87-016-448-080		C-CAP,TN 2.2-10 F95P
C116	87-012-195-080		C-CAP,U 100P-50CH
C117	87-012-286-080		CAP, U 0.01-25
C118	87-012-286-080		CAP, U 0.01-25
C119	87-010-787-080		CAP, U 0.022-25
C120	87-012-284-080		CAP, U 6800P-50
C121	87-A10-504-080		C-CAP,U 0.047-16 K B
C122	87-012-286-080		CAP, U 0.01-25
C123	87-012-286-080		CAP, U 0.01-25
C200	87-A10-260-080		C-CAP,U 0.1-16 K B
C201	87-A10-260-080		C-CAP,U 0.1-16 K B
C202	87-012-286-080		CAP, U 0.01-25
C203	87-A10-827-080		C-CAP,U 0.47-6.3 K B
C204	87-A10-827-080		C-CAP,U 0.47-6.3 K B
C205	87-A10-260-080		C-CAP,U 0.1-16 K B
C206	87-012-270-080		CAP, U 470P-50
C207	87-A10-827-080		C-CAP,U 0.47-6.3 K B
C208	87-012-286-080		CAP, U 0.01-25
C209	87-A10-260-080		C-CAP,U 0.1-16 K B
C210	87-012-169-080		C-CAP,U 7P-50 CH
C211	87-012-169-080		C-CAP,U 7P-50 CH
C212	87-A11-050-080		C-CAP,TN 47U-4 M F95 A
C213	87-012-172-080		C-CAP,U 10P-50 CH
C214	87-A10-260-080		C-CAP,U 0.1-16 K B
C215	87-012-188-080		C-CAP,U 47P-50 CH
C216	87-010-785-080		C-CAP,U0.015-25BK
C217	87-012-274-080		CHIP CAP,U 1000P-50B
C218	87-012-274-080		CHIP CAP,U 1000P-50B
C302	87-A10-260-080		C-CAP,U 0.1-16 K B
C309	87-A10-260-080		C-CAP,U 0.1-16 K B
C313	87-012-286-080		CAP, U 0.01-25
C315	87-012-286-080		CAP, U 0.01-25
C353	87-A10-260-080		C-CAP,U 0.1-16 K B
C400	87-A11-049-080		C-CAP,U 1-6.3 K B
C411	87-A11-070-080		C-CAP,U 0.033-16 K B
C412	87-A11-070-080		C-CAP,U 0.033-16 K B
C413	87-A10-353-080		C-CAP,U0.22-10KB
C414	87-012-278-080		C-CAP,U 2200P-50 B
C415	87-012-278-080		C-CAP,U 2200P-50 B
C416	87-012-278-080		C-CAP,U 2200P-50 B
C417	87-A10-260-080		C-CAP,U 0.1-16 K B
C418	87-A10-260-080		C-CAP,U 0.1-16 K B
C419	87-A10-260-080		C-CAP,U 0.1-16 K B
C420	87-A11-049-080		C-CAP,U 1-6.3 K B
C421	87-A11-049-080		C-CAP,U 1-6.3 K B
C422	87-A10-260-080		C-CAP,U 0.1-16 K B
C423	87-A10-260-080		C-CAP,U 0.1-16 K B
C424	87-A10-260-080		C-CAP,U 0.1-16 K B
C425	87-016-448-080		C-CAP,TN 2.2-10 F95P
C429	87-A11-046-080		C-CAP,TN 100U-4 M F95 B
C430	87-A11-046-080		C-CAP,TN 100U-4 M F95 B
C430	87-A11-046-080		C-CAP,TN 100U-4 M F95 B
C431	87-016-448-080		C-CAP,TN 2.2-10 F95P
C432	87-016-296-080		C-CAP,TN 22-4SV(A)
C500	87-012-266-080		C-CAP,U 220P-50 B
C501	87-016-296-080		C-CAP,TN 22-4SV(A)
C502	87-016-448-080		C-CAP,TN 2.2-10 F95P
C503	87-012-286-080		CAP, U 0.01-25
C504	87-012-278-080		C-CAP,U 2200P-50 B
C505	87-A11-049-080		C-CAP,U 1-6.3 K B
C506	87-016-564-080		C-CAP,10-6.3 PSN
C507	87-012-286-080		CAP, U 0.01-25
C508	87-A10-504-080		C-CAP,U 0.047-16 K B
C509	87-A10-504-080		C-CAP,U 0.047-16 K B
C510	87-012-270-080		CAP, U 470P-50
C511	87-A10-260-080		C-CAP,U 0.1-16 K B
C512	87-016-449-080		C-CAP,TN 10-4 F95 P
C513	87-016-449-080		C-CAP,TN 10-4 F95 P
C600	87-A11-162-080		C-CAP,TN 47-16 M F93
C602	87-016-446-080		C-CAP,TN 220-4 M
C603	87-A10-260-080		C-CAP,U 0.1-16 K B
C605	87-012-268-080		C-CAP,U 330P-50 K B
C606	87-012-286-080		C-CAP,U 0.01-25 K B
C607	87-A11-050-080		C-CAP,TN 47U-4 M F95 A
C609	87-A11-967-080		C-CAP,TN 10-16 M F93
C610	87-A10-260-080		C-CAP,U 0.1-16 K B
C701	87-016-296-080		C-CAP,TN 22-4SV(A)
C711	87-012-274-080		C-CAP,U 1000P-50 K B
C712	87-012-274-080		C-CAP,U 1000P-50 K B
C713	87-016-296-080		C-CAP,TN 22-4SV(A)
C714	87-016-296-080		C-CAP,TN 22-4SV(A)
C715	87-016-296-080		C-CAP,TN 22-4SV(A)
C716	87-010-831-080		C-CAP,U 0.1-16 Z F
C717	87-016-296-080		C-CAP,TN 22-4SV(A)
C718	87-010-831-080		C-CAP,U 0.1-16 Z F
C719	87-010-831-080		C-CAP,U 0.1-16 Z F
C720	87-010-831-080		C-CAP,U 0.1-16 Z F
C721	87-016-296-080		C-CAP,TN 22-4SV(A)

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C722	87-016-296-080		C-CAP,TN 22-4SV(A)
C723	87-010-831-080		C-CAP,U 0.1-16 Z F
C724	87-016-296-080		C-CAP,TN 22-4SV(A)
C725	87-010-831-080		C-CAP,U 0.1-16 Z F
C800	87-012-274-080		C-CAP,U 1000P-50 K B
C801	87-016-449-080		C-CAP,TN 10-4 F95 P
C802	87-016-449-080		C-CAP,TN 10-4 F95 P
C803	87-012-337-080		C-CAP,U 56P-50 CH
C804	87-012-337-080		C-CAP,U 56P-50 CH
C805	87-016-449-080		C-CAP,TN 10-4 F95 P
C806	87-010-831-080		C-CAP,U 0.1-16 Z F
C807	87-016-449-080		C-CAP,TN 10-4 F95 P
C808	87-010-831-080		C-CAP,U 0.1-16 Z F
C809	87-016-449-080		C-CAP,TN 10-4 F95 P
C810	87-016-449-080		C-CAP,TN 10-4 F95 P
C811	87-012-278-080		C-CAP,U 2200P-50 K B
C812	87-012-278-080		C-CAP,U 2200P-50 K B
CN100	87-A61-134-080		C-CONN,22P H FLZ-SM1-TB
CN200	87-A61-133-080		C-CONN,14P H FLZ-RSM1-TB
CN300	87-A61-128-080		C-CONN,6P H FLZ-SM1-TB
CN500	87-A60-888-080		C-CONN,9P V FMN-BMTTN-TF
CN600	87-A60-891-080		C-CONN,14P V FMN-BMTTN-TF
FB200	88-108-000-080		C-JUMPER,U
L100	87-A50-360-080		C-COIL,47UH K NLFC252018
L102	87-A50-360-080		C-COIL,47UH K NLFC252018
L200	87-A50-359-080		C-COIL,22UH K NLFC252018
L411	87-A50-358-080		C-COIL,10UH K NLFC252018
L412	87-A50-358-080		C-COIL,10UH K NLFC252018
L413	87-A50-358-080		C-COIL,10UH K NLFC252018
L414	87-A50-358-080		C-COIL,10UH K NLFC252018
L415	87-A50-012-080		C-COIL,100UH LQH3C
L416	87-A50-011-080		C-COIL,47UH LQH3C
L417	87-A50-359-080		C-COIL,22UH K NLFC252018
L500	87-A50-361-080		C-COIL,100UH K NLFC252018
L501	87-A50-011-080		C-COIL,47UH LQH3C
L601	87-A50-604-080		C-COIL,180UH-D75C
L602	87-A50-116-080		C-COIL,4.7UHLQH3C
L611	87-A50-163-080		C-COIL,ZBFS5101-PT
L612	87-005-512-080		C-COIL,BLM21A05
L613	87-005-512-080		C-COIL,BLM21A05
L614	87-A50-163-080		C-COIL,ZBFS5101-PT
L615	87-A90-034-080		C-FLTR,EMI BLM41P750
L616	87-A50-163-080		C-COIL,ZBFS5101-PT
L701	87-A50-116-080		C-COIL,4.7UHLQH3C
L702	87-A50-116-080		C-COIL,4.7UHLQH3C
L800	87-A50-362-080		C-COIL,ACM2520-601-2P
L801	87-A50-362-080		C-COIL,ACM2520-601-2P
L802	87-005-774-080		C-COIL,4BLH
L803	87-A50-116-080		C-COIL,4.7UHLQH3C
R108	87-022-294-080		C-RES,U 470K 1-16W F
R114	87-022-223-080		CHIP RES 2.2K 1/16W F
R115	87-022-223-080		CHIP RES 2.2K 1/16W F
R116	87-022-223-080		CHIP RES 2.2K 1/16W F
R502	87-022-227-080		C-RES,U 3.3K-1/16W F
R506	87-022-217-080		C-RES,U 1.2K-1/16W F
R507	87-022-237-080		C-RES,U 8.2K-1/16W F
R508	87-022-243-080		CHIP RES,U 15K-1/16W F
R509	87-022-241-080		CHIP RESTOR 12K 1/16W F
S304	87-A90-953-080		C-SW,PUSH MPU10992MLB1
X200	87-A70-160-080		C-VIB,XTAL 22.5792MHZ FCX-03
X301	87-A70-100-080		C-VIB,CER 12.0MHZ PBRC-BR-A
SW C.B			
CN50	87-A61-132-080		C-CONN,10P H FLZ-SM1-TB
S50	87-A91-419-080		C-SW,PUSH MPU11121MLB1
S51	87-A91-419-080		C-SW,PUSH MPU11121MLB1
S52	87-A91-008-080		C-SW,PUSH 2-1-1 SPVE4.1
S53	87-A91-009-080		C-SW,PUSH 2-1-1 SPVE5.2
S54	87-A91-420-080		C-SW,PUSH MPU11120MLA1
FLEX MD MECHA1 C.B			
	8Z-HM1-610-110		PWP,FLEX MECHA

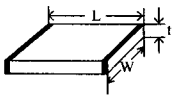
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

Oチップ抵抗部品コード／CHIP RESISTOR PART CODE

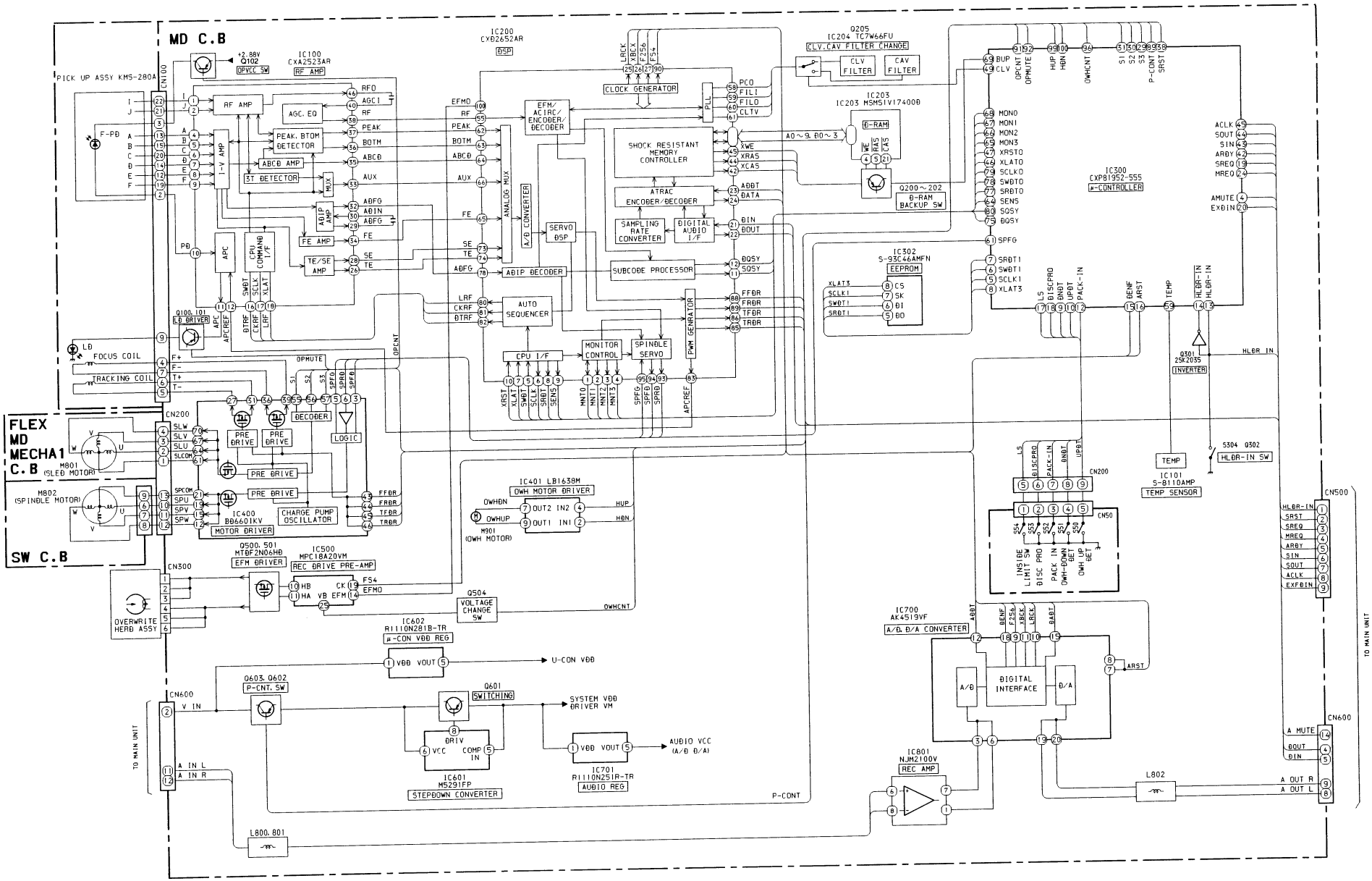
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding

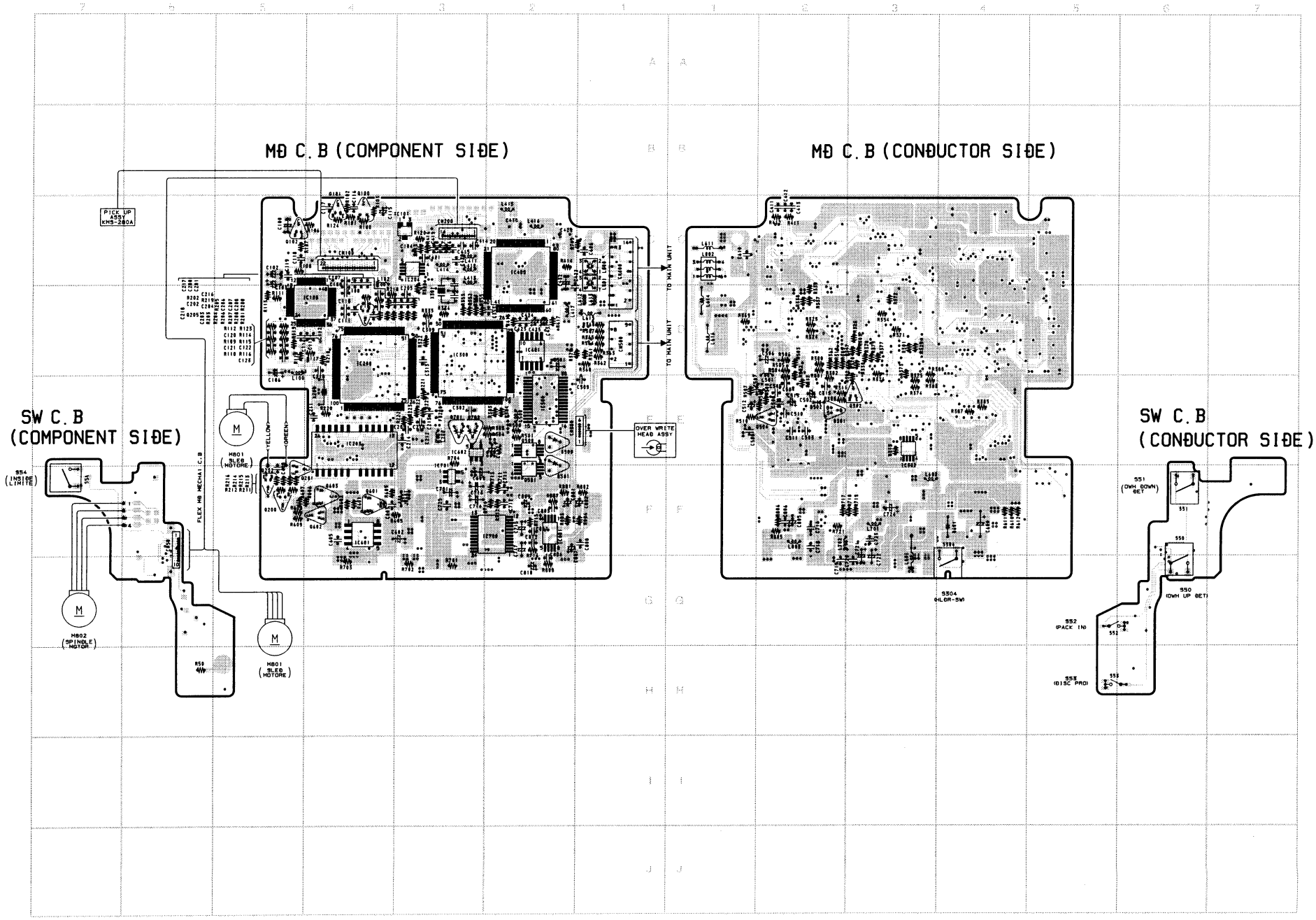


チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	±5%	CJ		1.0	0.5	0.35	104
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

BLOCK DIAGRAM




MD C.B (COMPONENT SIDE)
MD C.B (CONDUCTOR SIDE)
SW C.B (COMPONENT SIDE)
SW C.B (CONDUCTOR SIDE)
PICK UP 553 KMS-280A
OVER WRITE HEAD ASSY
TO MAIN UNIT
TO MAIN UNIT
M801 SLED MOTORE
M802 SPINDLE MOTOR
M801 SLED MOTORE
FLEX MD MECHA I.C.B
YELLOW
GREEN
554 (INSIDE LIMITE)
551 (DWN DOWN) SET
550 (DWN UP SET)
552 (PACK IN)
555 (DISC PRO)
9304 HLDR-SW

TEST MODE

1. Starting up the MD Test Mode

While pressing the ECO/DEMO button, insert the AC plug into the outlet.

Notes: 1) Mechanical abnormalities are ignored while the test mode is starting up.
If any abnormality occurs, disconnect the plug immediately.
2) During test mode operation, playback and recording are not possible.

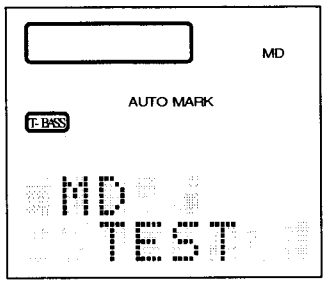


Fig-1. Test mode start-up display

2. Checking the MD Test Mode

Indication
About five seconds later after the test mode starts, characters as shown in Fig-1 appear on the screen and the test mode becomes usable.

3. Canceling the MD Test Mode

1) Press the MD EJECT button to eject the disk. (Confirm that the OWH moves up.)
2) Disconnect the AC plug.
* If the MD test mode is canceled by procedures other than the above, the unit sometimes run incorrectly. If this happens, disconnect the AC plug.

4. Switching to the Servo Standby Mode

After starting up the test mode, press the STOP key to display "SV OFF" and switch to the servo standby mode. (Fig-2)
Change from the servo standby mode to other modes.
When the STOP key is pressed in each mode, the display returns to "SV OFF".

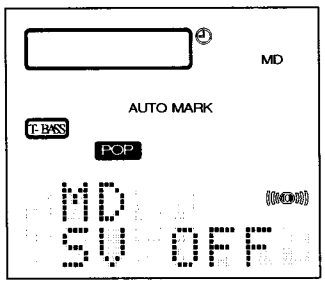


Fig-2. Servo standby mode

5. Checking the Sled Feed Operation

1) Press the F.SKIP button in the "SV OFF" state to move the pickup to the outer circumference. Then "T.S. FWD" is displayed.
2) Press the B.SKIP button in the "SV OFF" state to move the pickup to the inner circumference. Then "T.S. RVS" is displayed. Turn on the INSIDE LIMIT switch to display "JAZZ".

6. Checking the Laser Power

1) Every time the MD REC/EDIT button is pressed in the "SV OFF" state, the laser power is switched. The display is switched as shown below.

2) After checking, press the STOP button to return the display to "SV OFF".

7. Checking the OWH and Each Detection Switch

To check the operations of the OWH and each detection switch, follow the procedure given below.
Insert an MO (PIT) disk and confirm that SLEEP lights.
When the CD → MD button is pressed with the disk inserted, the OWH moves down. When the FUNCTION button is pressed, the OWH moves up.

* Do not move down the OWH with the PIT disk inserted because the unit may be damaged.
* Do not insert the disk while the PIT disk is down because the OWH may be damaged.
* While the OWH is moving down, the lid of the MD is locked.

CD → MD button ..... OWH DOWN
FUNCTION button ..... OWH UP

8. Turning On/Off Each Switch and Checking the Display

The state of each switch can be checked on the display.

	Display	Function	Lit	Off
①	T-BASS	Laser power	Displayed using the three-step level meter (READ-1/2-WRITE)	
②	AUTO MARK	Disk mode	PIT DISC (PIT)	
③	TIME MARK	Disk mode	MO DISC (GROOVE)	
④	ROCK	Write-protection detection switch	REC OK	REC protection
⑤	POP	Reflection ratio detection result	High reflection ratio (PIT DISC)	Low reflection ratio (MO DISC)
⑥	JAZZ	INSIDE LIMIT switch	Switch ON (innermost circumference)	Switch OFF
⑦	MONO	OWH DOWN detection	Switch ON (OWH DOWN)	Switch OFF
⑧	STEREO	OWH UP detection	Switch ON (OWH UP)	Switch OFF
⑨	SLEEP	Disk detection	Disk	No disk
⑩	TIMER	Lid open/close detection	OPEN	CLOSE

Note: "Switch ON" means that the switch is being pressed.

9. Checking the Servo Operation

9-1. Checking the Focus Search and Spindle Kick (checking the S-curve)

1) When the MD button of the remote control is pressed in the "SV OFF" state, the focus search and spindle kick are performed at the same time. Then "FCS CHK" is displayed.
These operations are repeated regardless of whether a disk is installed. Therefore, the S-curve can be checked with the disk installed.
2) After checking, press the STOP button to return the display to "SV OFF".

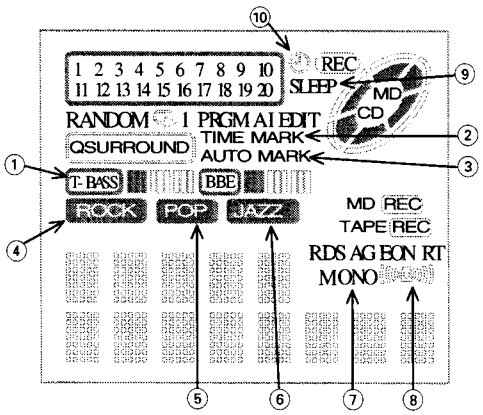


Fig-3 Indication on the display and its function

9-2. Checking the Focus Servo

1) Insert a disk.
2) Press the MD MODE button and set the servo mode using the inserted disk as shown below.

- MO disk ..... "SEL GRV" appears and "TIME MARK" lights.
- PIT disk ..... "SEL PIT" appears and "AUTO MARK" lights.

3) Move the pickup to the center of the disk using the B.SKIP button and the SKIP button.
4) Press the PLAY button.
If the focus servo is normal, "FCS Srch" appears and "FCS ON!" appears.
5) After checking, press the STOP button to return the display to "SV OFF".

* If the lens fails to focus, the focus search is repeated.

9-3. Checking the All Servo ON

1) When the ENTER button is pressed in the "FCS ON!" state, the tracking sled servo is turned on and all servos run. If the servos are all normal, "SV ON" is displayed.
2) After checking, press the STOP button to return the display to "SV OFF".

ELECTRIC ADJUSTMENT

All the MD blocks are adjusted and checked in the test mode.

1. Temperature Compensation Adjustment

* Normally, do not perform the temperature compensation adjustment.
If it needs to be performed, follow the procedure given below in a suitable environment for measuring the correct temperature near the unit.

- Test point: Check the test point on the display.
- Tool: Thermometer (Celsius)

Adjustment procedure:

1) After the MD test mode starts up, press the STOP button to display "SV OFF".
2) Press the DISPLAY button to display "T = $**".
3) Press the PAUSE button to display "T + **C + **".
4) Put the thermometer near the MD mechanism to measure the room temperature (Celsius).
5) The values of +## are changed by pressing the B.SKIP button and F.SKIP button. Adjust the value **C±## (Celsius) until the value is the same as the thermometer reading. Press the ENTER button to store the value.
6) After adjustment, press the STOP button to return the display to "SV OFF".

2. Laser Power Adjustment

- Test point: Pickup laser output
- Tool: Laser power meter (meters that can measure up to 10 mW)

2-1. Playback Laser Power Adjustment

- Adjustment procedure

1) Press the MD REC/EDIT button in the "SV OFF" state to change the display to "L READ".
2) Press the PAUSE button once to display "L = $**".
3) Measure the pickup laser output using the laser power meter and adjust it using the B.SKIP button and F.SKIP button so that it is around 0.68 mW. Then, press the ENTER button. (default setting L = $09)
4) After adjustment, press the STOP button to change the display to "SV OFF".

2-2. Record Laser Power Adjustment

1) Press the EDIT button three times in the "SV OFF" state to change the display to "L WRITE".
2) Press the PAUSE button once to display "L = $**".
3) Measure the pickup laser output using the laser power meter and adjust it using the B.SKIP button and F.SKIP button so that it is around 6.8±0.03 mW. Then, press the ENTER button. (default setting L = $4A)
4) After adjustment, press the STOP button to return the display to "SV OFF".

Note: If the laser power exceeds 7.0 mW, the pickup may be damaged.

3. Automatic Sequence Adjustment (EFB/IVR/FOCUS AGC/TRACKING AGC adjustment)

- Test point: Check the test point on the display.
- Test disk: MDW-74 (MDW-60), TGYS-1 or equivalent

3-1. Adjusting the MO Disk

- Adjustment procedure

1) Insert the MDW-74.
2) Press the MD MODE button to display "SEL GRV".
3) Press the BAND button to display "AUTO ADJ" and start the adjustment. After adjustment, "Complete" is displayed. (If the adjustment failed, "FAILED" appears.)
4) Then, press the STOP button to return the display to "SV OFF".
5) Proceed to 3-2 for checking.

3-2. IVR, EFB, Focus/ Tracking/ Sled Gain Check of MO Disk

• Checking procedure (Perform this check consecutively after 3.1)

1) Move the pickup to the center of the disk using the B.SKIP button and F.SKIP button.
2) Press the PLAY button to display "FCS ON!".
3) Press the ENTER button to display "SV ON".
4) Press the STOP button and press the DISPLAY key twice. Confirm that the values of "iv**ef◇◇" are within the range shown below. (hexadecimal)
   iv "**" ..... 04 to 09
   ef "◇◇" ..... 09 to 15
5) Press the DISPLAY again. Confirm that the values of "Gf**##△△" are within the range shown below. (hexadecimal)
   "**" ..... 1A to 45
   "##" ..... 15 to 40
   "△△" ..... 15 to 40
6) After adjustment, press the STOP button to return the display to "SV OFF".

3-3. Adjusting the PIT Disk

• Adjustment procedure

1) Insert the TGYS-1.
2) Press the MD MODE button to display "SEL PIT".
3) Press the BAND button to display "AUTO ADJ". After adjustment, "Complete" is displayed. (If the adjustment failed, "FAILED" appears.)
4) Then, press the STOP button to return the display to "SV OFF".
5) Proceed to 3-4 for checking.

3-4. IVR, EFB, Focus/ Tracking/ Sled Gain Check of PIT Disk

• Checking procedure (Perform this check consecutively after 3.3)

1) Move the pickup to the center of the disk using the B.SKIP button and F.SKIP button.
2) Press the PLAY button to display "FCS ON!".
3) Press the ENTER button to display "SV ON".
4) Press the STOP button and press the DISPLAY button twice. Confirm that the values of "iv**ef◇◇" are within the range shown below. (hexadecimal)
   iv "**" ..... 14 to 19
   ef "◇◇" ..... 09 to 15
5) Press the DISPLAY again. Confirm that the values of "Gf**##△△" are within the range shown below. (hexadecimal)
   f "**" ..... 1A to 45
   t "##" ..... 15 to 40
   s "△△" ..... 15 to 40
6) After adjustment, press the STOP button to return the display to "SV OFF".

4. Error Rate Check (PIT disk)

- Test point: Check the test point on the display.
- Test disk: TSYS-1 or equivalent Checking procedure
  1) Insert the TGYS-1.
  2) Move the pickup to the center of the disk using the B.SKIP button and F.SKIP button.
  3) Press the MD MODE button to display "SEL PIT".
  4) Press the PLAY button to display "FCS ON!".
  5) Press the ENTER button to display "SV ON". Press the DISPLAY button once to confirm that the address indication is stable. (Refer to Fig-4)
  6) Press the DISPLAY button once again to display the playback error rate. (Refer to Fig-5.) Confirm that the numbers of "##: ****" (underlined portion) is "0030" or lower.
  7) After check, press the STOP button to return the display to "SV OFF".

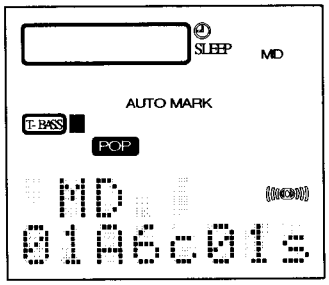


Fig-4. Address indication

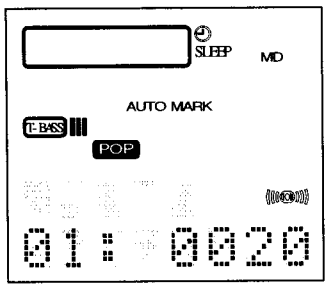


Fig-5. Error rate indication

5. Record/Playback Error Rate Check (MO disk)

- Test point: Check the test point on the display.
- Test disk: MDW-74 (MDW-60)
- Checking procedure
  1) Insert the MDW-74.
  2) Move the pickup to the center of the disk using the B.SKIP button and F.SKIP button.
  3) Press the JOG MODE button. Recording starts automatically in cluster 600.
  4) After recording for about 15 seconds, press the STOP button.
  5) Press the ECO/DEMO button. "SV ON" is displayed from around cluster 600 onward (the display is in the sate of the address indication) and press the DISPLAY button in or after cluster 600. (Refer to Fig-6.)
     Then confirm that the values of "##: ****" (underlined portion) is "0030" or lower.
  6) After adjustment, press the STOP button to return the display to "SV OFF".

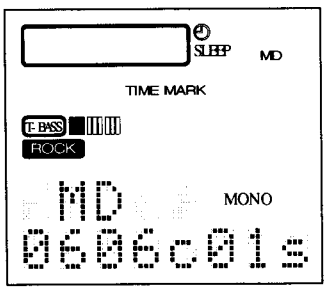


Fig-6. Address indication

6. Checking the No Adjust

1) Press the POWER button to turn off the power.
2) Press the POWER button again to turn on the power.
3) Confirm that "No Adjust" is not displayed.

* If "No Adjust" is displayed, perform all the adjustments of 1 to 3.

IC DESCRIPTION

IC, CXD2652AR

Pin No.	Pin Name	I/O	Description
1	MNT0	O	Monitor output terminal.
2	MNT1	O	Monitor output terminal.
3	MNT2	O	Monitor output terminal.
4	MNT3	O	Monitor output terminal.
5	SWDT	I	Microprocessor serial interface data input.
6	SCLK	I	Microprocessor serial interface shift clock input.
7	XLAT	I	Microprocessor serial interface latch input. Latched at falling down edge.
8	SRDT	O	Microprocessor serial interface data output.
9	SENS	O	The terminal which outputs internal status in accordance with the address of the microprocessor serial interface.
10	XRST	I	Reset input. L: reset.
11	SQSY	O	Disc sub code Q sync/ADIP sync output.
12	DQSY	O	Subcode Q sync output of U-bit CD or MD format when the DIGITAL IN source is CD or MD.
13	RECP	I	Laser power selection input. H: Recording power, L: Playback power.
14	XINT	O	Interrupt request output terminal. L is output when interrupt status is generated.
15	TX	I	Record data output enable signal input terminal. H: enable.
16	OSCI	I	Crystal oscillator circuit input terminal.
17	OSCO	O	Crystal oscillator circuit output terminal. (Inverted output of OSCI).
18	XTSL	I	OSCI terminal input frequency selection. H: 512 Fs (22.5792 MHz), L: 1024 Fs (45.1584 MHz).
19	DVDD	—	Digital Power Supply.
20	DVSS	—	Digital GND.
21	DIN	I	Digital audio interface signal input.
22	DOUT	O	Digital audio interface signal output.
23	ADDT	I	Analog recording signal input terminal. (External A/D converter output is connected to this terminal).
24	DADT	O	RECORD monitor output/decode audio data output.
25	LRCK	O	LRCK (44.1 kHz) output terminal to external audio block.
26	XBCK	O	Bit clock output (2.8224 kHz) output terminal to external audio block.
27	FS256	O	256 Fs output. (11.2896 MHz).
28	DVDD	—	Digital power supply.
29	A03	O	Address output to external DRAM.
30	A02	O	Address output to external DRAM.
31	A01	O	Address output to external DRAM.
32	A00	O	Address output to external DRAM.
33	A10	O	Address output to external DRAM. (Not used).
34	A04	O	Address output to external DRAM.
35	A05	O	Address output to external DRAM.
36	A06	O	Address output to external DRAM.
37	A07	O	Address output to external DRAM.

Pin No.	Pin Name	I/O	Description
38	A08	O	Address output to external DRAM.
39	A11	O	Address output to external DRAM.
40	DVSS	—	Digital GND.
41	XOE	O	External DRAM output enable.
42	XCAS	O	$\overline{CAS}$ output to external DRAM.
43	A09	O	Address output to external DRAM.
44	XRAS	O	$\overline{RAS}$ output to external DRAM.
45	XWE	O	Write enable for external DRAM.
46	D1	I/O	Data bus for external DRAM.
47	D0	I/O	Data bus for external DRAM.
48	D2	I/O	Data bus for external DRAM.
49	D3	I/O	Data bus for external DRAM.
50	MVCI	I	External VCO (784 fs) clock input.
51	ASYO	O	Playback EFM full swing output. (L: VSS, H: VDD)
52	ASYI	I	Playback EFM comparator slice voltage input.
53	AVDD	—	Analog GND.
54	BIAS	I	Playback EFM comparator bias current input.
55	RFI	I	Playback EFM RF signal input.
56	AVss	—	Analog power supply.
57	PDO	O	Phase comparison output to EFM decoder analog PLL. (Not used)
58	PCO	O	Phase comparison output to the master PLL of playback digital PLL and to the recording EFM PLL.
59	FILI	I	Filter input to the master PLL of playback digital PLL and to the recording EFM PLL.
60	FILO	O	Filter output to the master PLL of playback digital PLL and to the recording EFM PLL.
61	CLTV	I	Internal VCO control voltage of the master PLL of playback digital PLL and of the recording EFM PLL.
62	PEAK	I	Optical light volume's peak hold signal input.
63	BOTM	I	Optical light volume's bottom hold signal input.
64	ABCD	I	Optical light volume signal input.
65	FE	I	Focus error signal input.
66	AUX1	I	Auxiliary input 1.
67	VC	I	Center terminal voltage input.
68	ADIO	O	Monitor output of A/D converter input signal. (Not used)
69	AVDD	—	Analog power supply.
70	ADRT	I	Voltage input of the upper limit of the A/D converter operation range.
71	ADRB	I	Voltage input of the lower limit of the A/D converter operation range.
72	AVSS	—	Analog GND.
73	SE	I	Sled error signal input.
74	TE	I	Tracking error signal input.
75	SLED	I	Auxiliary input 2.

Pin No.	Pin Name	I/O	Description
76	DCHG	I	Connected to the low impedance power supply.
77	APC	I	Error signal input to the laser digital APC.
78	ADFG	I	ADIP2 binary-converted FM signal (22.05±1 kHz) input.
79	FOCNT	O	Current source setting output terminal to CXA2523.
80	LRF	O	Latch output for CXA2523 control. Shut down: Latch.
81	CKRF	O	Shift clock output for CXA2523 control.
82	DTRF	O	Data output for CXA2523 control.
83	APCREF	O	Reference PWM output to laser APC.
84	LDDR	O	PWM output to laser digital APC. (Not used)
85	TRDR	O	Tracking servo drive PWM output. (-).
86	TFDR	O	Tracking servo drive PWM output. (+).
87	DVDD	—	Digital power supply.
88	FFDR	O	Focus servo drive PWM output. (+).
89	FRDR	O	Focus servo drive PWM output. (-).
90	FS4	O	4 fs output. (176.4 kHz).
91	SRDR	O	Sled servo drive PWM output. (-). (Not used)
92	SFDR	O	Sled servo drive PWM output. (+). (Not used)
93	SPRD	O	Spindle servo drive PWM output. (PWM (-) or negative polarity).
94	SPFD	O	Spindle servo drive PWM output. (PWM (+) or PWM absolute value).
95	FGIN	I	FG input to spindle CAV servo.
96	TEST1	I	Test pin. Connected to GND.
97	TEST2	I	Test pin. Connected to GND.
98	TEST3	I	Test pin. Connected to GND.
99	DVSS	—	Digital GND.
100	EFMO	O	Low signal during playback. EFM (encode data) output: during recording.

IC, CXA2523AR

Pin No.	Pin Name	I/O	Description
1	I	I	Input "I" RF signal converted to I-V.
2	J	I	Input "J" RF signal converted to I-V.
3	VC	O	Output voltage for VCC/2.
4	A	I	Input current for main beam servo signal A.
5	B	I	Input current for main beam servo signal B.
6	C	I	Input currentt for main beam servo signal C.
7	D	I	Input current for main beam servo signal D.
8	E	I	Input current for side beam servo signal E.
9	F	I	Input current for side beam servo signal F.
10	PD	I	Input beam spectrum monitor signal.
11	APC	O	Output laser APC.
12	APCREF	I	Input reference voltage for laser power setting.
13	GND	—	GND.
14	TEMPI	I	Temperature sensor connection pin. (Not used)
15	TEMPR	I	Temperature sensor connection pin. Output reference voltage. (Not used)
16	SWDT	I	Input micro-processor serial interface data.
17	SCLK	I	Input micro-processor serial interface shift clock.
18	XLAT	I	Input micro-processor serial interface latch. "L": Latch.
19	XSTBY	I	Standby setting pin. "H": Normal mode, "L": Standby.
20	FOCNT	I	Internal current setting pin.
21	VREF	O	Output reference voltage. (Not used)
22	EQADJ	I/O	EQ central frequency setting pin.
23	3TADJ	I/O	BPF3T central frequency setting pin.
24	VCC	—	Power supply pin.
25	WBLADJ	I/O	BPF22 central frequency setting pin.
26	TE	O	Output tracking error signal.
27	CSLED	—	LPF capacitor connection pin for SLED error signal.
28	SE	O	Output SLED error signal.
29	ADFG	O	Output ADIP FM signal.
30	ADIN	I	Input ADIP signal comparator.
31	ADAGC	—	ADIPAGC capacitor connection pin.
32	ADFG	O	Output ADIP2 binary data signal.
33	AUX	O	13 output / Output temperature signal. Switched by serial command.
34	FE	O	Output focus error signal.
35	ABCD	O	Output beam spectrum signal for main beam servo detector.
36	BOTM	O	Output bottom hold signal for RF/ABCD.
37	PEAK	O	Output peak hold signal for RF/ABCD.
38	RF	O	RF equalizer output pin.
39	RF	—	RFAGC capacitor connection pin.
40	AGCI	I	RFAGC input pin.
41	COMPO	O	User comparator output pin. (Not used).

Pin No.	Pin Name	I/O	Description
42	COMPP	I	User comparator non-inverted input pin. (Not used)
43	ADDC	I/O	Capacitor connection pin for ADIP amplifier on return circuit.
44	OPO	O	Output pin for user operational amplifier. (Not used)
45	OPN	I	Non-inverted input pin for user operational amplifier. (Not used)
46	RFO	O	RF amplifier output pin. Check point for eye pattern.
47	MORFI	I	Input pin where Groove RF signal is AC coupled.
48	MORFO	O	Output pin for Groove RF signal.

IC, BD6601KV

Pin No.	Pin Name	I/O	Description
1	SGND	—	Small signal circuit block ground. (MOS)
2	ASGND	—	Small signal circuit block ground. (Bip.)
3	PWIN1	I	Half bridge 1 input.
4	PWIN2	I	Half bridge 2 input.
5	FG	O	FG output.
6	BRK-	I	Brake comparator input (-).
7	BRK+	I	Brake comparator input (+).
8	CSL2	—	Slope capacitor connection terminal 2.
9	CSL1	—	Slope capacitor connection terminal 1.
10	CST	—	Startup oscillation capacitor connection terminal.
11	SPPG2	—	Spindle power circuit block ground 2.
12	SPWOUT	O	Spindle motor output. (W phase)
13	SPVM2	—	Spindle power circuit block power 2.
14	N.C.	—	Not used.
15	SPVOUT	O	Spindle motor output. (V phase)
16	N.C.	—	Not used.
17	SPPG1	—	Spindle power circuit block ground 1.
18	N.C.	—	Not used.
19	SPUOUT	O	Spindle motor output. (U phase)
20	SPVM1	—	Spindle power circuit block power 1.
21	SPCOM	I	SPIN motor coil center input terminal.
22	SPWIN	I	SPIN detection comparator input. (W phase)
23	SPVIN	I	SPIN detection comparator input. (V phase)
24	SPUIN	I	SPIN detection comparator input. (U phase)
25	H2PG2	—	H bridge 2 power block ground 2.
26	N.C.	—	Not used.
27	H2ROUT	O	H bridge 2 reverse output.
28	N.C.	—	Not used.
29	H2VM	—	H bridge 2 power block power.
30	N.C.	—	Not used.
31	H2FOUT	O	H bridge 2 forward output.
32	N.C.	—	Not used.
33	H2PG1	—	H bridge 2 power block ground 1.
34	H1PG2	—	H bridge 1 power block ground 2.
35	N.C.	—	Not used.
36	H1ROUT	O	H bridge 1 reverse output.
37	N.C.	—	Not used.
38	H1VM	—	H bridge 1 power block power.
39	H1FOUT	O	H bridge 1 forward output.
40	H1PG1	—	H bridge 1 power block ground 1.
41	VCC1	—	Small signal circuit block power terminal 1. (MOS)

Pin No.	Pin Name	I/O	Description
42	VCC2	—	Small signal circuit block power terminal 2. (Bip.)
43	IN1F	I	H bridge 1 forward input.
44	IN1R	I	H bridge 1 reverse input.
45	IN2F	I	H bridge 2 forward input.
46	IN2R	I	H bridge 2 reverse input.
47	EXTCLK	I	Sync clock input terminal.
48	C1P	—	Charge pump capacitor 1 connection terminal +.
49	C1M	—	Charge pump capacitor 1 connection terminal -.
50	C2P	—	Charge pump capacitor 2 connection terminal +.
51	C2M	—	Charge pump capacitor 2 connection terminal -.
52	VG	O	Charge pump output.
53	STALL	I	Standby terminal.
54	STHB	I	H1/H2 bridge mute terminal.
55	S1	I	Stepping decoder input 1.
56	S2	I	Stepping decoder input 2.
57	S3	I	Stepping decoder input 3.
58	BEMFU	O	STEP detection comparator output. (U phase)
59	BEMFV	O	STEP detection comparator output. (V phase)
60	BEMFW	O	STEP detection comparator output. (W phase)
61	SLCOM	I	STEP motor coil center input terminal.
62	SLVM1	—	Stepping power block power 1.
63	N.C.	—	Not used.
64	SLUOUT	O	Stepping motor output. (U phase)
65	SLPG1	—	Stepping power block ground 1.
66	N.C.	—	Not used.
67	SLVOUT	O	Stepping motor output. (V phase)
68	N.C.	—	Not used.
69	SLVM2	—	Stepping power block power 2.
70	SLWOUT	O	Stepping motor output. (W phase)
71	SLPG2	—	Stepping power block ground 2.
72	N.C.	—	Not used.
73	PW1VM	—	Half bridge 1 power block power.
74	N.C.	—	Not used.
75	PW1OUT	O	Half bridge 1 output.
76	N.C.	—	Not used.
77	PWPG	—	Half bridge power block ground.
78	N.C.	—	Not used.
79	PW2OUT	O	Half bridge 2 output.
80	PW2VM	—	Half bridge 2 power block power.

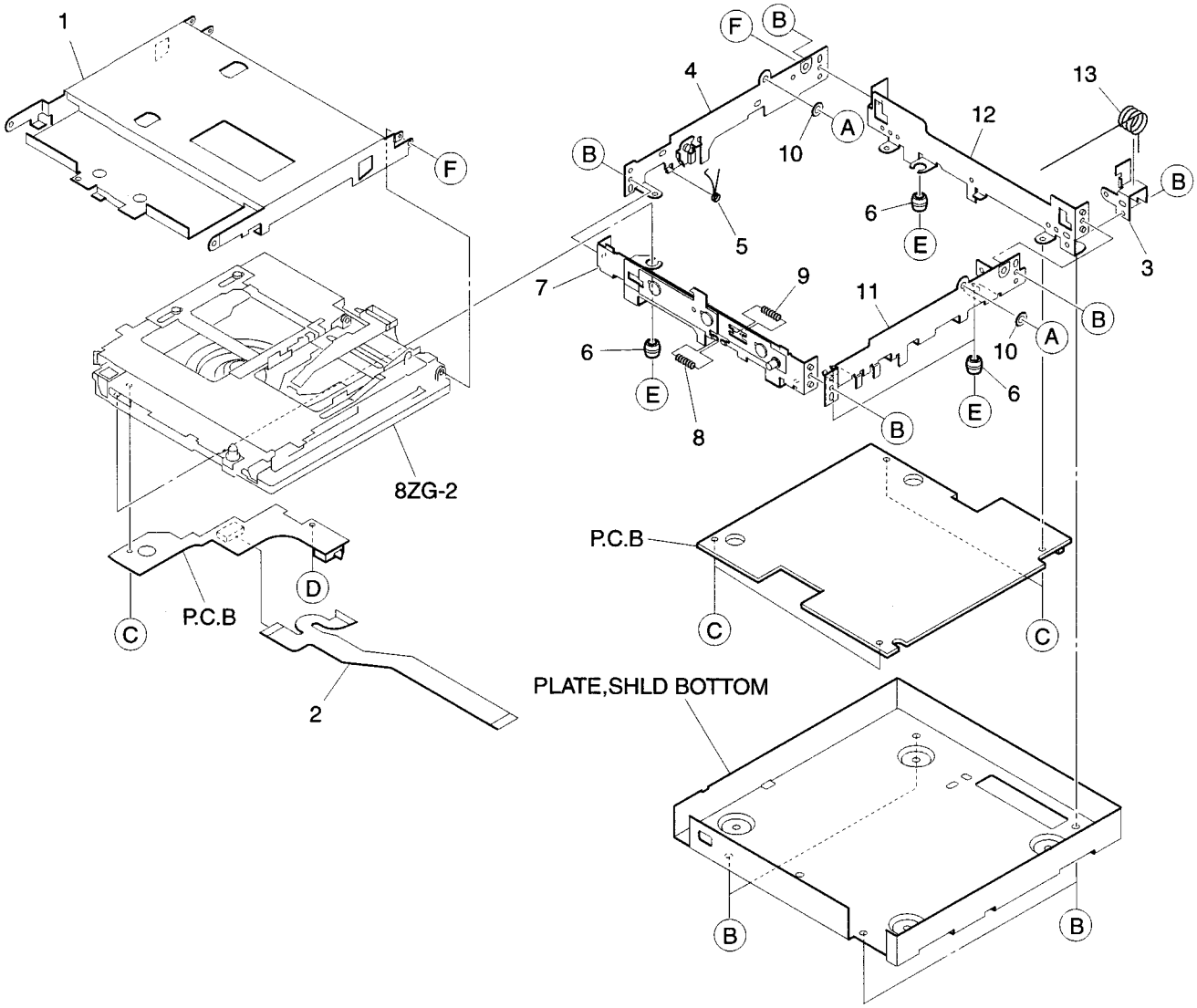
IC, CXP81952M-555R

Pin No.	Pin Name	I/O	Description
1	N.C.	O	Not used.
2	N.C.	O	Not used.
3	N.C.	O	Not used.
4	AMUTE	O	Audio mute signal output. (Muted at "H".)
5	SCLK1	O	Serial clock output for EEPROM interface.
6	SW-DT1	O	Serial data output for EEPROM interface.
7	SRDT1	I	Serial data input for EEPROM interface.
8	XLAT3	O	EEPROM chip select signal output. (H active.)
9	DNDT	I	OWH DOWN position detection switch input.
10	UPDT	I	OWH UP position detection switch input.
11	N.C.	O	Not used.
12	PACK-IN	I	Disk presence detection switch input.
13	HLDRIN	I	Holder open/close detection switch input.
14	HLDR-IN	I	Holder open/close detection switch input. (Opposite of No. 13 at all times)
15	DENF	O	De-emphasis ON/OFF signal output. (OFF at "H". ON at "L".)
16	ARST	O	AK4519 power control output. (ON at "H". OFF at "L".)
17	LS	I	Pickup innermost circumference position detection switch input. (innermost circumference at "L".)
18	DSCPRO	I	Write-protection tab detection switch.
19	SREQ	I	System control send request signal input to system control interface.
20	EXTDIN	O	External digital-in enable signal output.
21	N.C.	O	Not used.
22	N.C.	O	Not used.
23	N.C.	O	Not used.
24	MREQ	O	MD microprocessor send request signal output to system control interface.
25	PD3	I	Connected to Vss.
26	BEMFW	I	Motor driver comparator output.
27	BEMFV	I	Motor driver comparator output.
28	BEMFU	I	Motor driver comparator output.
29	SL_S3	O	Sled control output.
30	SL_S2	O	Sled control output.
31	SL_S1	O	Sled control output.
32	N.C.	O	Not used.
33	N.C.	O	Not used.
34	N.C.	O	Not used.
35	N.C.	O	Not used.
36	STHB	O	Two-axis mute signal output to BD6601KVT. (Mute at "L".)
37	MP	—	Connected to Vss.
38	SRST	I	MD microprocessor reset signal input.
39	DGND	—	Connected to Vss.
40	XTALO	—	Terminal to which external crystal is connected for system clock oscillation 1.

Pin No.	Pin Name	I/O	Description
41	XTALI	—	Terminal to which external crystal is connected for system clock oscillation 2.
42	ARDY	I	Ready signal input for system control interface.
43	SIN	I	Serial data input for system control interface.
44	SOUT	O	Serial data output for system control interface.
45	ACLK	O	Serial clock output for system control interface.
46	XLAT	O	Latch signal output for CXD2652 interface.
47	XRST	O	CXD2652 reset signal output.
48	TX	O	Record data output enable. (Enabled at "H".)
49	CLV	O	Circuit selection output for wide PLL. (Normal PLL at "H".)
50	AVSS	—	Connected to Vss.
51	AVREF	—	Connected to VDD.
52	AVDD	—	Connected to VDD.
53	VLEVEL	I	Pull up.
54	AN6	I	Connected to Vss.
55	AN5	I	Connected to Vss.
56	AN4	I	Connected to Vss.
57	AN3	I	Connected to Vss.
58	AN2	I	Connected to Vss.
59	TEMP	I	Temperature sensor signal input.
60	AN0	I	Connected to Vss.
61	SPFG	I	Spindle FG signal input.
62	EXI0	I	Pull up to VDD.
63	TEST0	I	Pull up to VDD.
64	SENS	I	CXD2652 SENS signal input.
65	MON3	I	CXD2652 monitor signal input 3.
66	MON2	I	CXD2652 monitor signal input 2.
67	MON1	I	CXD2652 monitor signal input 1.
68	MON0	I	CXD2652 monitor signal input 0.
69	BUP	O	DRAM refresh selection signal output. (Microprocessor control at "H". DSP at "L".)
70	M_RAS	O	RAS signal output.
71	M_CAS	O	CAS signal output.
72	XLAT3	O	Not used.
73	SEO	O	PWM output for sled motor drive.
74	N.C.	O	Not used.
75	DQSY	I	DIGITAL-IN SUB-Q sync input.
76	XINT	I	CXD2652 status, sync input.
77	SRDT	I	Serial data input for CXD2652 interface.
78	SWDT	O	Serial data output for CXD2652 interface.
79	SCKO	O	Serial clock output for CXD2652 interface.
80	SQSY	I	SUB-Q/ADIP sync input.
81	XLAT1	O	Not used.

Pin No.	Pin Name	I/O	Description
82	XRST1	O	Not used.
83	RMC	I	DIN signal input.
84	TXI	—	Connected to Vss.
85	TXO	—	Open.
86	VSS	—	Connected to Vss.
87	VDD	—	Connected to VDD.
88	N.C.	—	Connected to VDD.
89	PCONT	O	Power control output inside the unit. (ON at "H". OFF at "L".)
90	XSTBY	O	CXA2523 standby signal output.
91	OPCNT	O	Laser ON/OFF signal output.
92	OPMUTE	O	Laser mute signal output.
93	N.C.	O	Not used.
94	RECP	O	Laser power selection signal output.
95	N.C.	O	Not used.
96	OWHCNT	O	Head motor drive control. (During driving: "H")
97	RECM1	O	For REC driver.
98	RECM2	O	For REC driver.
99	HUP	O	Overwrite head UP output. (UP at "H".)
100	HDOWN	O	Overwrite head DOWN output. (DOWN at "H".)

MECHANICAL EXPLODED VIEW 1/1



MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

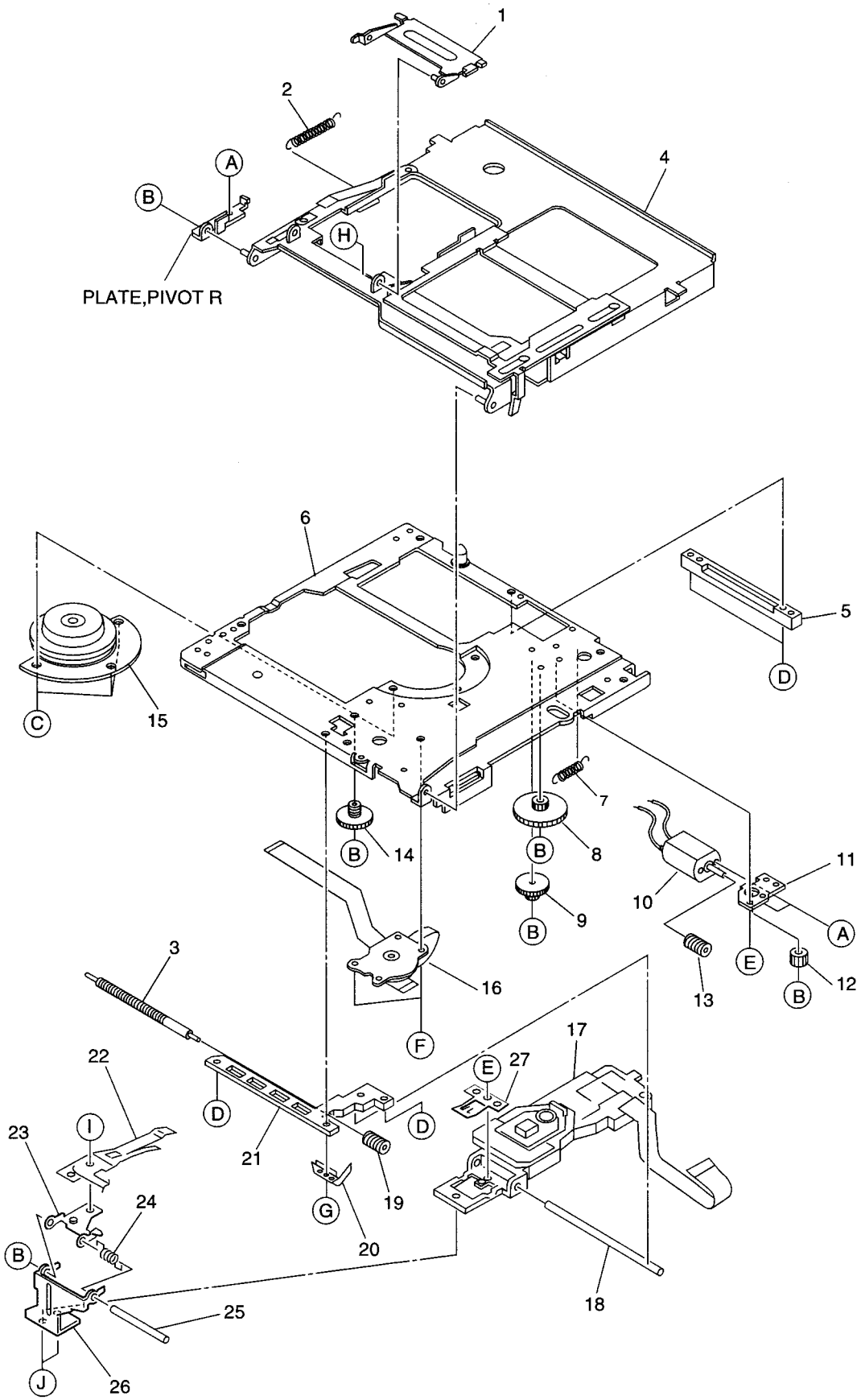
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
TYPE=A			
1	8A-ZG5-201-010		ARM ASSY,TOP
2	8Z-HM1-610-110		PWB,FLEX MECHA
3	8A-ZG5-214-010		HLDR,SPR-T
4	8A-ZG5-203-010		FRAME ASSY,L
5	8Z-HM1-229-110		SPR-T,LEVER SW
6	8Z-HM1-234-010		DMPR,G MECHA
7	8A-ZG5-207-010		FRAME ASSY,FRONT
8	8Z-HM1-226-010		SPR-C,EJECT
9	8Z-HM1-227-010		SPR-C,LOCK
10	8A-ZG5-221-010		W,2-4-1 W/O ADH
11	8A-ZG5-206-010		FRAME,R
12	8A-ZG5-213-010		FRAME,REAR
13	8A-ZG5-216-010		SPR-T,EJECT
A	87-078-145-010		S-SCRW,+1.4-0.8 CR N
B	87-HM1-254-010		S-SCREW,1.4-1.4CR
C	8Z-HM1-236-010		S-SCREW,+1.4-1.2 SWCH CR
D	88-ZG2-256-010		S-SCREW,+1.4-3.5
E	8Z-HM1-235-010		S-SCREW,DMPR
F	88-HJ3-220-010		S-SCREW,+1.4-0.7-1 BLK NL

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
TYPE=YA			
1	8A-ZG5-201-010		ARM ASSY,TOP
2	8Z-HM1-610-110		PWB,FLEX MECHA
3	8A-ZG5-220-010		HLDR,SPR-T R
4	8A-ZG5-203-010		FRAME ASSY,L
5	8Z-HM1-229-110		SPR-T,LEVER SW
6	8Z-HM1-234-010		DMPR,G MECHA
7	8A-ZG5-207-110		FRAME ASSY,FRONT
8	8Z-HM1-226-010		SPR-C,EJECT
9	8Z-HM1-227-010		SPR-C,LOCK
10	8A-ZG5-221-010		W,2-4-1 W/O ADH
11	8A-ZG5-206-010		FRAME,R
12	8A-ZG5-213-010		FRAME,REAR
13	8A-ZG5-216-010		SPR-T,EJECT
A	87-078-145-010		S-SCRW,+1.4-0.8 CR N
B	87-HM1-254-010		S-SCREW,1.4-1.4CR
C	8Z-HM1-236-010		S-SCREW,+1.4-1.2 SWCH CR
D	88-ZG2-256-010		S-SCREW,+1.4-3.5
E	8Z-HM1-235-010		S-SCREW,DMPR
F	88-HJ3-220-010		S-SCREW,+1.4-0.7-1 BLK NL

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

MD MECHANISM EXPLODED VIEW 1/1



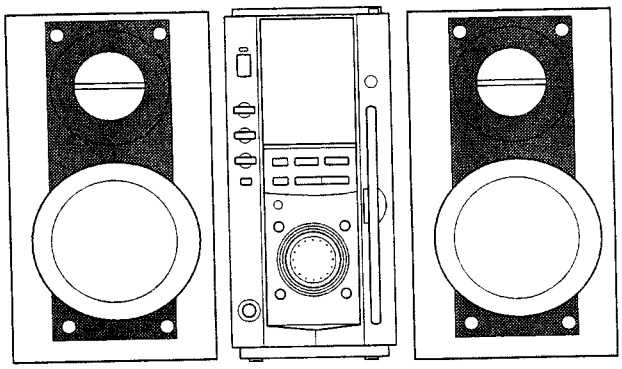
MD MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	87-ZG1-262-010		LEVER ASSY,KICK OWH
2	87-ZG1-254-010		SPR-E,EJECT
3	88-ZG2-235-010		SHAFT,PU GUIDE G
4	88-ZG2-216-010		HLDR ASSY,CTRG
5	88-ZG2-226-010		HLDR,PU GUIDE S
6	88-ZG2-201-010		CHAS ASSY,R
7	88-ZG2-240-010		SPR-E,E-LOCK
8	88-ZG2-230-010		GEAR,C OWH
9	88-ZG2-229-010		GEAR,B OWH
10	87-A91-016-010		MOT,LA8-388L
11	88-ZG2-221-010		HLDR,MOT OWH
12	88-ZG2-228-010		GEAR,A OWH
13	88-ZG2-227-010		GEAR,MOT OWH
14	88-ZG2-231-010		GEAR,A SL
15	87-A91-014-010		MOT,MX-2225
16	87-A91-013-010		MOT,SSM11A
17	87-A90-956-010		PICKUP,KMS-280A
18	88-ZG2-234-010		SHAFT,PU GUIDE M
19	88-ZG2-232-010		GEAR,B SL
20	88-ZG2-241-010		SPR-T,LS GUIDE
21	88-ZG2-225-010		HLDR,PU GUIDE M
22	87-A91-109-010		HEAD,RF328-74B
23	87-ZG1-242-010		HLDR,OWH
24	87-ZG1-244-010		SPR-T,OWH
25	87-ZG1-243-010		SHAFT,OWH
26	88-ZG2-222-010		HLDR,PU
27	88-ZG2-243-010		SPR-P,RACK
A	87-078-120-010		1V+1.2-1.5
B	87-067-569-010		POLY WASHER 0.83-2.5-0.25
C	87-067-393-010		SCREW +1.4-1.4
D	87-067-360-010		SCREW+1.4-3.5(BK)
E	87-263-500-310		SCREW V+1.4-1.4
F	87-067-300-110		V+1.4-1.1
G	87-067-480-010		SPECIAL SCREW +1.4-3
H	87-067-858-010		PW,0.83-2.0-0.25 SLT
I	87-231-501-310		PRECISION SCREW, Q+1.4-1.6
J	88-ZG2-255-010		S-SCREW,+1.7-1.6 AZIMUTH

aiwa
SERVICE

XR-MDS7 EZ



SERVICE MANUAL

MD/CD STEREO SYSTEM

BASIC MD MECHANISM : AZG-5 YA
BASIC CD MECHANISM : TN-CCD1001-902M

- This Service Manual contains the additional information "CD ELECTRICAL SECTION" for the model XR-MDS7 (EZ). If requiring the other information, see Service Manual of XR-MDS7 (EZ), (S/M Code No. 09-002-421-3R2).

aiwa

S/M Code No. 09-00A-421-3S2

SUPPLEMENT

DATA

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saataa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herin may result in hazardous radiation exposure.

ATTENTION
L'utillisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL
Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

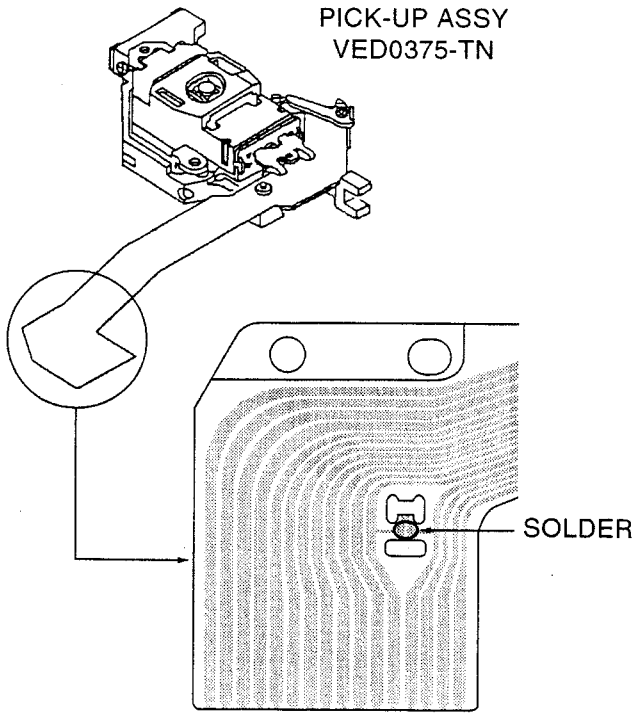
CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

Precaution to replace Optical block

(VED0375-TN)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

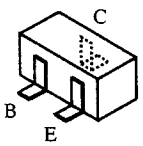
1) After the connection, remove solder shown in right figure.



ELECTRICAL MAIN PARTS LIST

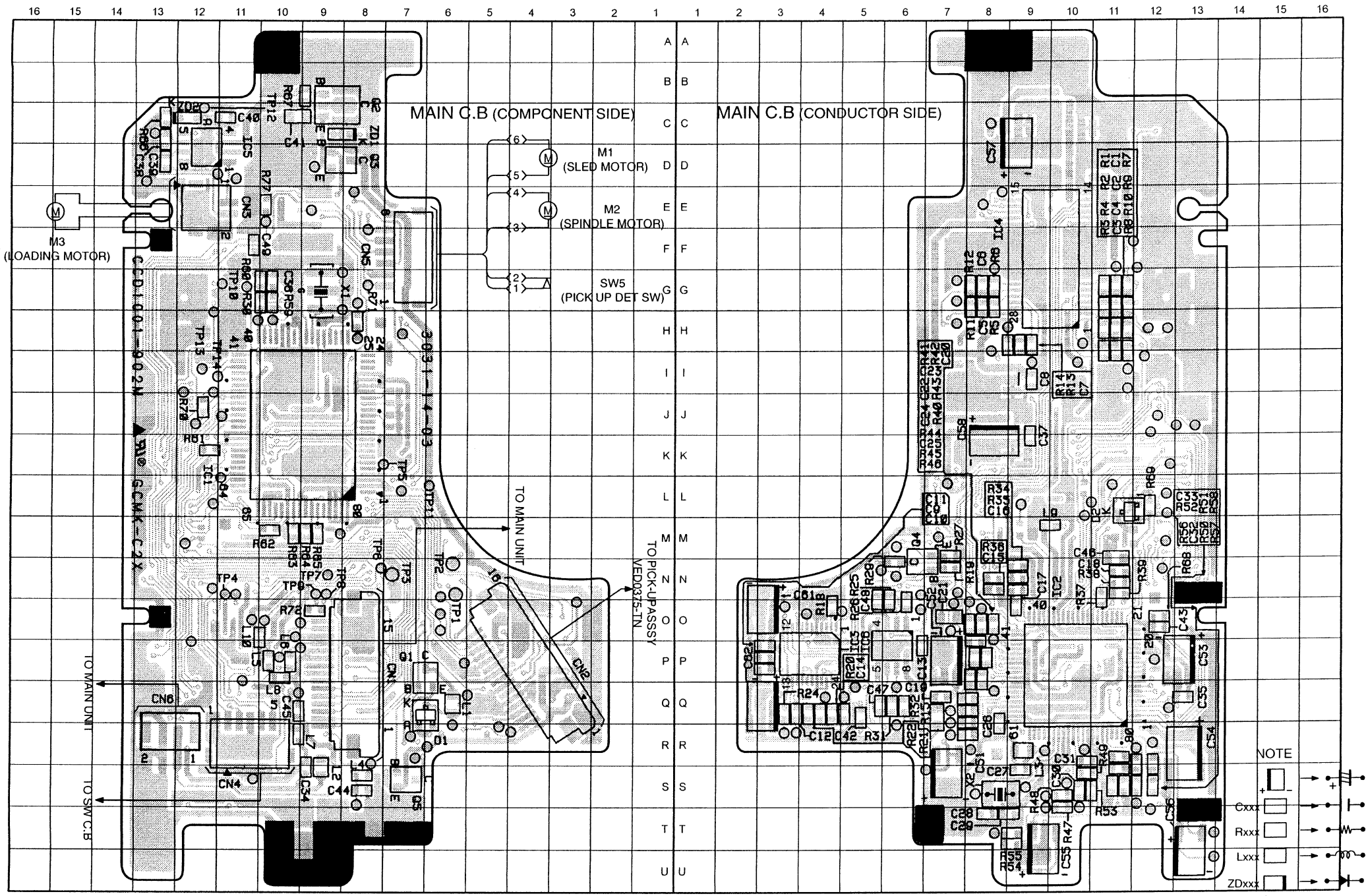
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	8A-CG5-602-010		IC,CXP84332-169Q
	87-A21-533-030		IC,CXD2587Q
	87-A21-596-040		IC,CXA2570N
	87-A20-711-040		IC,BA5970FP
	87-A21-777-040		IC,BA6289F
	87-A21-847-040		IC,UPC842G2
TRANSISTOR			
	87-A30-541-040		C-TR,2SB736
	87-A30-542-040		C-TR,2SD999(CL)
	87-A30-543-040		C-TR,FP1F3P
	89-316-236-080		C-TR,2SC1623(L6)
DIODE			
	87-020-331-080		DIODE,DAN202K
MAIN C.B			
C2	87-012-272-080		C-CAP,680P-50V
C4	87-012-272-080		C-CAP,680P-50V
C5	87-010-787-080		C-CAP,0.022U-25V
C6	87-010-787-080		C-CAP,0.022U-25V
C8	87-010-831-080		C-CAP,0.1U-16V
C9	87-010-831-080		C-CAP,0.1U-16V
C10	87-010-831-080		C-CAP,0.1U-16V
C11	87-010-831-080		C-CAP,0.1U-16V
C12	87-012-191-080		C-CAP,68P-50V
C13	87-010-831-080		C-CAP,0.1U-16V
C14	87-012-170-080		C-CAP,8P-25V
C15	87-012-199-080		C-CAP,220P-50V
C16	87-010-831-080		C-CAP,0.1U-16V
C17	87-012-199-080		C-CAP,220P-50V
C19	87-010-831-080		C-CAP,0.1U-16V
C21	87-012-358-080		C-CAP,0.47U-16V
C22	87-012-199-080		C-CAP,220P-50V
C24	87-012-276-080		C-CAP,1500P-50V
C25	87-010-829-080		C-CAP,0.047U-25V
C26	87-010-831-080		C-CAP,0.1U-16V
C27	87-010-831-080		C-CAP,0.1U-16V
C28	87-012-182-080		C-CAP,27P-50V
C29	87-012-182-080		C-CAP,27P-50V
C30	87-012-272-080		C-CAP,680P-50V
C31	87-012-197-080		C-CAP,150P-50V
C32	87-012-272-080		C-CAP,680P-50V
C33	87-012-197-080		C-CAP,150P-50V
C34	87-010-831-080		C-CAP,0.1U-16V
C35	87-010-831-080		C-CAP,0.1U-16V
C36	87-010-831-080		C-CAP,0.1U-16V
C37	87-010-831-080		C-CAP,0.1U-16V
C38	87-010-831-080		C-CAP,0.1U-16V
C39	87-010-831-080		C-CAP,0.1U-16V
C40	87-010-831-080		C-CAP,0.1U-16V
C41	87-012-358-080		C-CAP,0.47U-16V
C42	87-010-831-080		C-CAP,0.1U-16V
C43	87-010-831-080		C-CAP,0.1U-16V
C44	87-012-188-080		C-CAP,47P-50V
C46	87-012-358-080		C-CAP,0.47U-16V
C47	87-012-188-080		C-CAP,47P-50V
C48	87-012-188-080		C-CAP,47P-50V
C49	87-010-831-080		C-CAP,0.1U-16V
C51	87-A11-030-080		C-CAP,E 10U-25V
C52	87-A11-156-080		C-CAP,E 22U-25V
C53	87-A11-156-080		C-CAP,E 22U-25V
C54	87-A11-028-080		C-CAP,E 100U-10V
C55	87-A11-030-080		C-CAP,E 10U-25V
C56	87-A11-030-080		C-CAP,E 10U-25V
C57	87-A11-156-080		C-CAP,E 22U-25V
C58	87-A11-156-080		C-CAP,E 22U-25V
C61	87-A11-156-080		C-CAP,E 22U-25V
C62	87-A11-156-080		C-CAP,E 22U-25V
CN1	87-A61-488-080		CONN,15P
CN2	87-009-214-080		CONN,16P
CN3	87-099-440-080		CONN,2P
CN4	87-A61-477-080		CONN,5P
CN5	87-A61-478-080		CONN,6P
L1	87-005-906-080		C-COIL,10UH
L2	87-A50-665-080		C-COIL,100UH
L3	87-A50-665-080		C-COIL,100UH
L4	87-A50-623-080		C-COIL,BLM11A102S
L5	87-A50-623-080		C-COIL,BLM11A102S
L6	87-A50-623-080		C-COIL,BLM11A102S
L7	87-A50-623-080		C-COIL,BLM11A102S
L8	87-A50-623-080		C-COIL,BLM11A102S
L9	87-A50-623-080		C-COIL,BLM11A102S
L10	87-A50-623-080		C-COIL,BLM11A102S
SW5	S6-418-040-040		DET SW ESE11HS2
X1	87-A70-251-080		VIB,CSTCC10.0MG 10MHZ
X2	87-A70-295-080		VIB,CSACV16.93MXJ040
SW C.B			
SW1	S6-418-040-030		DET SW ESE22 MH3
SW2	S6-418-040-020		DET SW ESE22 MH1
SW3	S6-418-040-020		DET SW ESE22 MH1
SW4	S6-418-040-030		DET SW ESE22 MH3

TRANSISTOR ILLUSTRATION

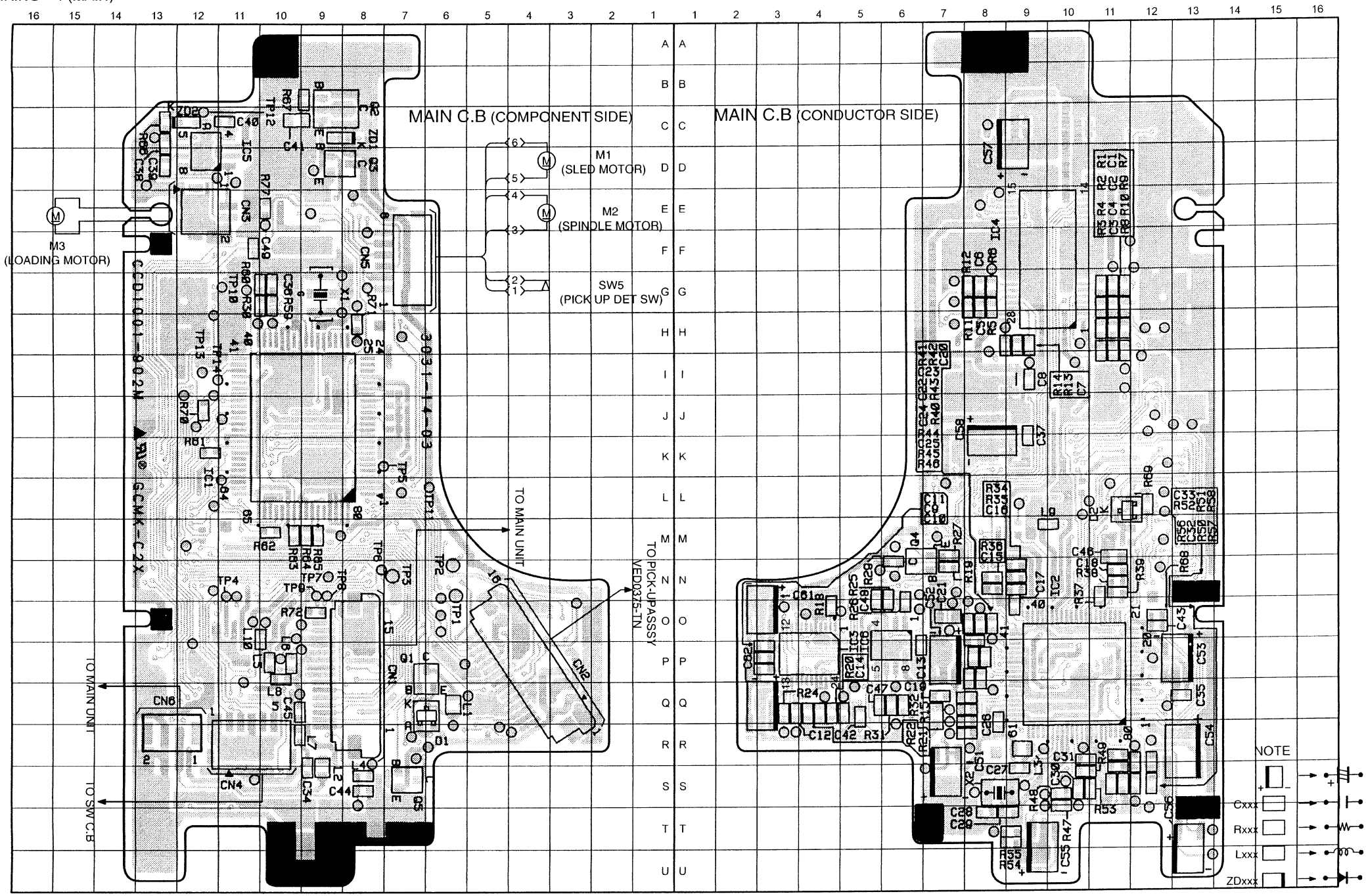


2SB736
2SD999(CL)
FP1F3P
2SC1623(L6)

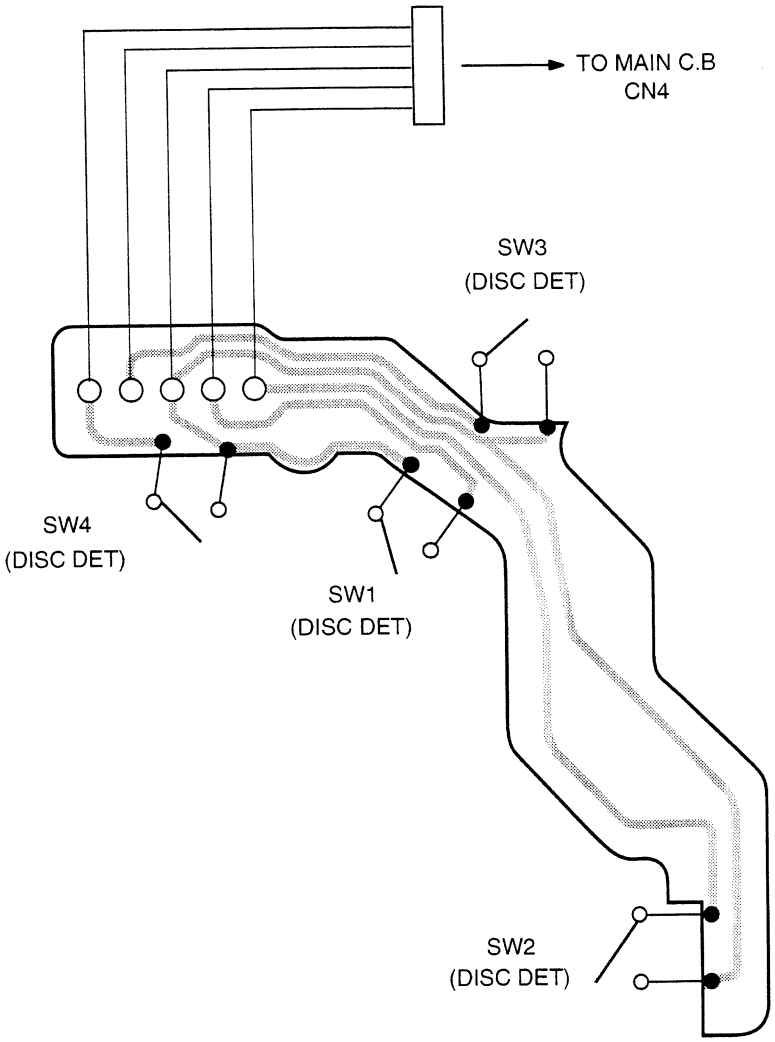
WIRING – 1 (MAIN)

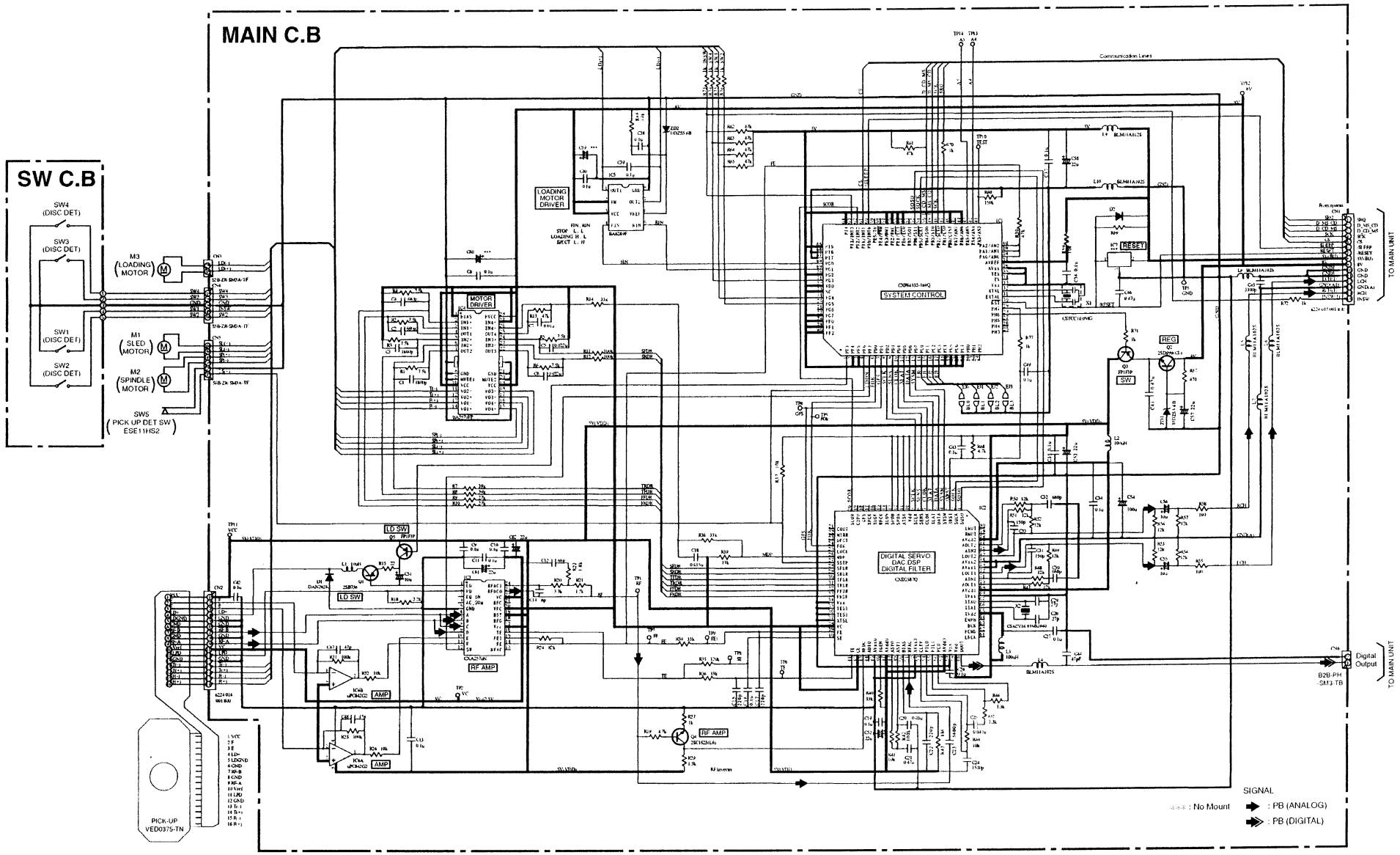


WIRING – 1 (MAIN)



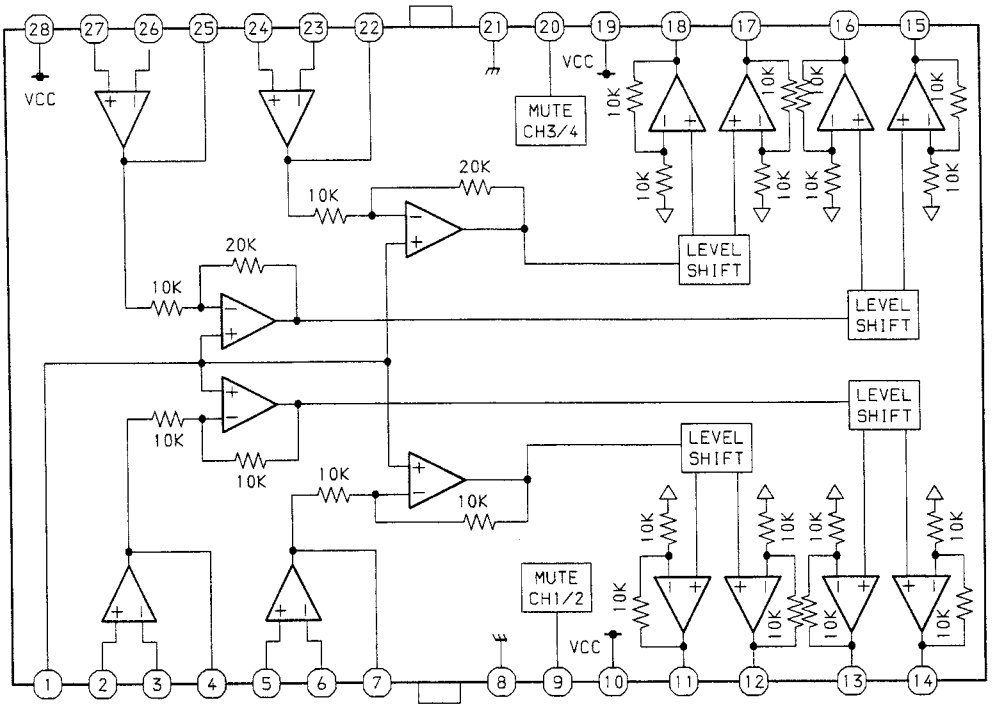
SW C.B


TO MAIN C.B
CN4
SW3
(DISC DET)
SW4
(DISC DET)
SW1
(DISC DET)
SW2
(DISC DET)

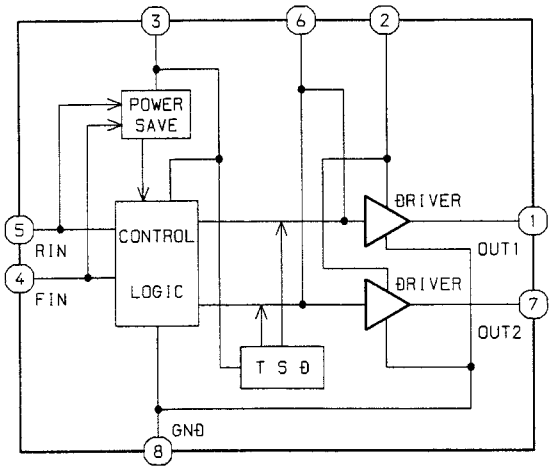

MAIN C.B
SW C.B
SW4 (DISC DET)
SW3 (DISC DET)
SW1 (DISC DET)
SW2 (DISC DET)
M3 (LOADING MOTOR)
M1 (SLED MOTOR)
M2 (SPINDLE MOTOR)
SW5 (PICK UP DET SW ESE11HS2
PICK-UP VED0375-TN
LOADING MOTOR DRIVER
MOTOR DRIVER
SYSTEM CONTROL
DIGITAL SERVO DAC DSP DIGITAL FILTER
RF AMP
AMP
LD SW
RESET
REG
TO MAIN UNIT
Digital Output
B2B-PH -SM3-TB
SIGNAL
: No Mount
: PB (ANALOG)
: PB (DIGITAL)

IC BLOCK DIAGRAM

IC, BA5970FP



IC, BA6289 F



IC DESCRIPTION

IC, CXD2587Q

Pin No.	Pin Name	I/O	Description
1	SQSO	O	Sub-Q 80-bit, PCM peak and level data output. CD TEXT data output.
2	SQCK	I	SQSO Clock input for reading.
3	XRST	I	System reset. Reset at "L".
4	SYSM	I	Muting input. Muted at "H".
5	DATA	I	Serial data input from CPU.
6	XLAT	I	Latch input from CPU. Latches serial data at the trailing edge.
7	CLOK	I	Clock input for serial data transfer from CPU.
8	SENS	O	SENS output to CPU.
9	SCLK	I	Clock input for reading SENS serial data.
10	VDD	–	Power supply of digital circuits.
11	ATSK	I/O	Input/output for anti-shock. (Connected to ground)
12	SPOA	I	Microprocessor extended interface (input A). (Connected to ground)
13	SPOB	I	Microprocessor extended interface (input B). (Connected to ground)
14	XLON	O	Microprocessor extended interface (output). (Not used)
15	WFCK	O	WFCK output. (Not used)
16	XUGF	O	XUGF output. MNT1 or RFCK is output when switched by command. (Not used)
17	XPCK	O	XPCK output. MNT0 is output when switched by command. (Not used)
18	GFS	O	GFS output. MNT3 or XROF is output when switched by command.
19	C2PO	O	C2PO output. GTOP is output when switched by command.
20	SCOR	O	Outputs "H" when either Sub-code sync S0 or S1 is detected.
21	COUT	I/O	Track number count signal input/output. (Not used)
22	MIRR	I/O	Mirror signal input/output. (Not used)
23	DFCT	I/O	Defect signal input/output. (Not used)
24	FOK	I/O	Focus OK signal input/output.
25	LOCK	I/O	Outputs "H" when GFS sampled by 460 Hz is "H"; "L" when GFS is "L" continuously for 8 samplings. Or, a signal is input when LKIN is "1".
26	MDP	O	Spindle motor servo control output.
27	SSTP	I	Disc innermost track detection signal input.
28	SFDR	O	Sled drive output.
29	SRDR	O	Sled drive output.
30	TFDR	O	Tracking drive output.
31	TRDR	O	Tracking drive output.
32	FFDR	O	Focus drive output.
33	FRDR	O	Focus drive output.
34	VSS	–	Ground of digital circuits.
35	TEST	I	TEST pin. (Connected to ground)
36	TES1	I	TEST pin. (Connected to ground)
37	XTSL	I	Crystal select input. "L" when 16.9344MHz crystal is used; "H" when 33.8688MHz crystal is used. (Connected to ground)
38	VC	I	Center voltage input.
39	FE	I	Focus error signal input.

Pin No.	Pin Name	I/O	Description
40	SE	I	Sled error signal input.
41	TE	I	Tracking error signal input.
42	CE	I	Center servo analog input.
43	RFDC	I	RF signal input.
44	ADIO	O	For test. (Not used)
45	AVSS0	–	Ground of analog circuits.
46	IGEN	I	Constant current input for OP amp.
47	AVDD0	–	Power supply of analog circuits.
48	ASYO	O	EFM full-swing output ("L" = VSS, "H" = VDD).
49	ASYI	I	Asymmetry comparator voltage input.
50	BIAS	I	Asymmetry circuit constant current input.
51	RFAC	I	EFM signal input.
52	AVSS3	–	Ground of analog circuits.
53	CLTV	I	VCO1 control voltage input for multiplication.
54	FILO	O	Filter output for master PLL (Slave: Digital PLL).
55	FILI	I	Filter input for master PLL.
56	PCO	O	Charge pump output for master PLL.
57	AVDD3	–	Power supply of analog circuits.
58	VSS	–	Ground of digital circuits.
59	VDD	–	Power supply of digital circuits.
60	DOUT	O	Digital Out output.
61	LRCK	O	D/A interface LR clock output f=Fs. (Not used)
62	PCMD	O	D/A interface serial data output (2's COMP, MSB first). (Not used)
63	BCK	O	D/A interface bit clock output. (Not used)
64	EMPH	O	Outputs "H" when disc to be played is applied with emphasis; "L" when disc is not applied with emphasis. (Not used)
65	XVDD	–	Power supply of master clock.
66	XTAI	I	Crystal oscillator input. External master clock is input to this pin.
67	XTAO	O	Crystal oscillator output.
68	XVSS	–	Ground of master clock.
69	AVDD1	–	Power supply of analog circuits.
70	AOUT1	O	Lch analog output.
71	AIN1	I	Lch OP amp input.
72	LOUT1	O	Lch LINE output.
73 ~ 74	AVSS1, AVSS2	–	Ground of analog circuits.
75	LOUT2	O	Rch LINE output.
76	AIN2	I	Rch OP amp input.
77	AOUT2	O	Rch analog output.
78	AVDD2	–	Power supply of analog circuits.
79	RMUT	O	Rch "0" detection flag. (Not used)
80	LMUT	O	Lch "0" detection flag. (Not used)

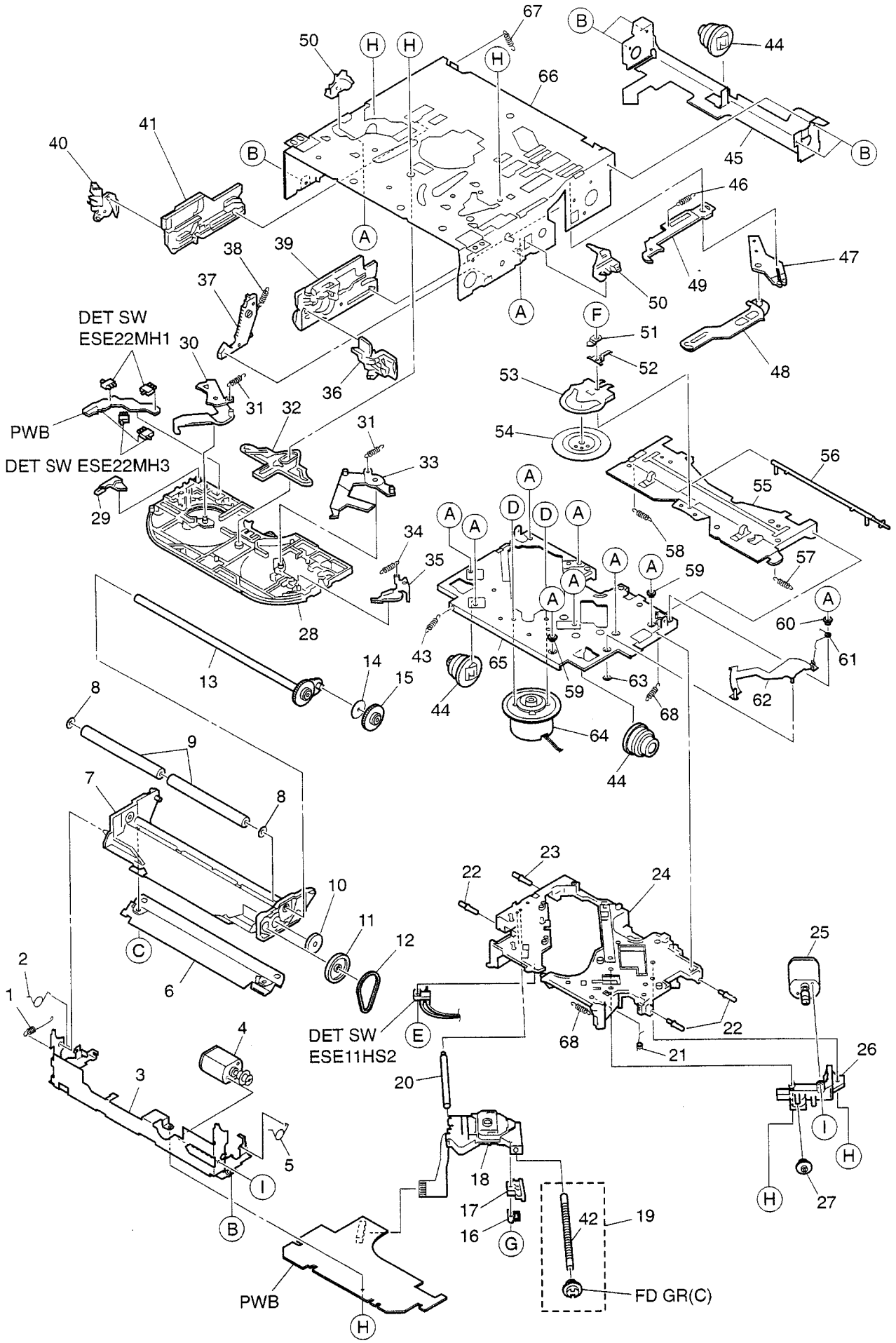
NOTES

- PCMD is a MSB first, two's complement output.
- GTOP is used to monitor the frame sync protection status. (High: sync protection window released.)
- XUGF is the frame sync obtained from the EFM signal, and is negative pulse. It is the signal before sync protection.
- XPCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge and the EFM signal transition point coincide.
- The GFS signal goes high when the frame sync and the insertion timing match.
- RFCK is derived from the crystal accuracy, and has a cycle of 136μs.
- C2PO reqresents the data error status.
- XROF is generated when the 16K RAM exceeds the ±4F jitter margin.

Monitor Pin Output Combinations

Command bit		Output Data			
MTSL1	MTSL0				
0	0	XUGF	XPCK	GFS	C2PO
0	1	MNT1	MNT0	MNT3	C2PO
1	0	RFCK	XPCK	XROF	GTOP

CD MECHANISM EXPLODED VIEW 1 / 1



CD MECHANISM PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	S3-031-110-030		EARTH SPR
2	S3-031-110-180		L.P SPRING(L)
3	S3-031-110-010		FRONT BRKT
4	S3-031-113-010		LDG MOTOR ASSY
5	S3-031-110-190		L.P SPRING(R)
6	S3-031-110-050		SUPPORT PL
7	S3-031-110-080		GR MT BLK
8	S9-W03-302-760		NW BLUE 2.9-5-0.3
9	S3-031-110-360		LDG ROLLER(P)
10	S3-031-110-100		LDG GR(3)
11	S3-031-110-090		LDG GR(2)
12	S3-031-110-290		LDG BELT
13	S3-031-113-020		LDG RLR SFT ASSY
14	S9-W07-250-300		LUMIL AR W 2.3-9.8-0.25
15	S3-031-110-120		LDG GR(5)
16	S3-031-050-300		NUT PUSH SPR PL(M)
17	S3-031-050-290		PU M NUI(M)
18	S6-904-160-010		PICK-UP VED0375-TN
19	S3-031-053-040		FEED SCREW(M)ASSY
20	S3-031-050-320		PU SHAFT(M)
21	S3-031-050-330		THRUST SPR(M)
22	S3-031-050-210		LOCK PIN
23	S3-031-050-220		LOCK PIN BL
24	S3-031-050-760		F.M. BASE(A)
25	S3-031-053-010		FEED MOTOR ASSY
26	S3-031-050-280		FD GR BLK(M)
27	S3-030-050-100		PU GEAR(B)
28	S3-031-010-570		UPPER PL(A)
29	S3-031-110-240		SW ACTR
30	S3-031-010-090		SEL ARM (L)
31	S3-031-010-110		S ARM SPRING
32	S3-031-010-080		SEL STOP PL
33	S3-031-010-100		SEL ARM (R)
34	S3-031-010-250		S.L ARM SPRING
35	S3-031-010-240		S.L ARM
36	S3-031-010-580		FIX ARM(R)A
37	S3-031-010-380		LDG GR(6)B
38	S3-031-010-220		LDG GR(6)SPRING
39	S3-031-010-370		FIX PL(R)B
40	S3-031-010-340		FIX ARM(L)B
41	S3-031-010-500		FIX PL(L)Z
42	S3-031-050-310		FD SCREW(M)
43	S3-031-010-530		HUNG DOWN SPRING(A)
44	S3-031-050-240		DAMPER(J)
45	S3-031-010-020		REAR D BRKT
46	S3-031-010-150		TRIG PL SPRING
47	S3-031-010-160		TRIG ARM
48	S3-031-010-120		TRIG LVR
49	S3-031-010-140		TRIG PL
50	S3-031-010-030		DAMPER PIN
51	S3-031-050-360		STOPPER SPR
52	S3-031-050-190		8CM STOPPER SPR PL
53	S3-031-050-230		CLAMPER PLATE
54	S3-031-050-150		CLAMPER
55	S3-031-050-740		CLP ARM(A)
56	S3-031-050-410		8CM STOPPER(M)
57	S3-031-050-140		CLP ARM SPRING
58	S3-031-050-250		CLP ARM SPR(L)
59	S3-031-050-700		D.S ARM COLLAR
60	S3-031-050-720		SP COLLAR
61	S3-031-050-710		D.S ARM SPR
62	S3-031-055-010		DISC SUPPORT ARM ASSY
63	S9-W02-500-900		PW CUT 2.1-4-0.5
64	S3-031-053-050		SPINDLE MOTOR(M)ASSY
65	S3-031-050-730		T.T.BASE(A)
66	S3-031-010-010		FRAME
67	S3-031-010-620		BARNCE SPRING(LR)
68	S3-031-010-610		BARNCE SPRING(R)
A	87-841-034-410		CAMERA B TAPPING SCREW M2-4
B	87-741-033-410		CAMERA SCREW TS.G M2-4
C	S9-C04-205-030		CAMERA S TAPPING SCREW M2-5
D	87-267-525-310		CAMERA SCREW M1.7-2.2
E	87-263-036-010		CAMERA TAPPING SCREW B 3 M2-8
F	S9-C42-202-010		CAMERA TAPPING SCREW S 3 M2-2
G	S9-C45-175-030		CAMERA TAPPING SCREW P3 M1.7-5
H	87-351-549-310		CAMERA B TAPPING SCREW M2-4
I	S9-P02-200-310		TAMS SCREW M2-3